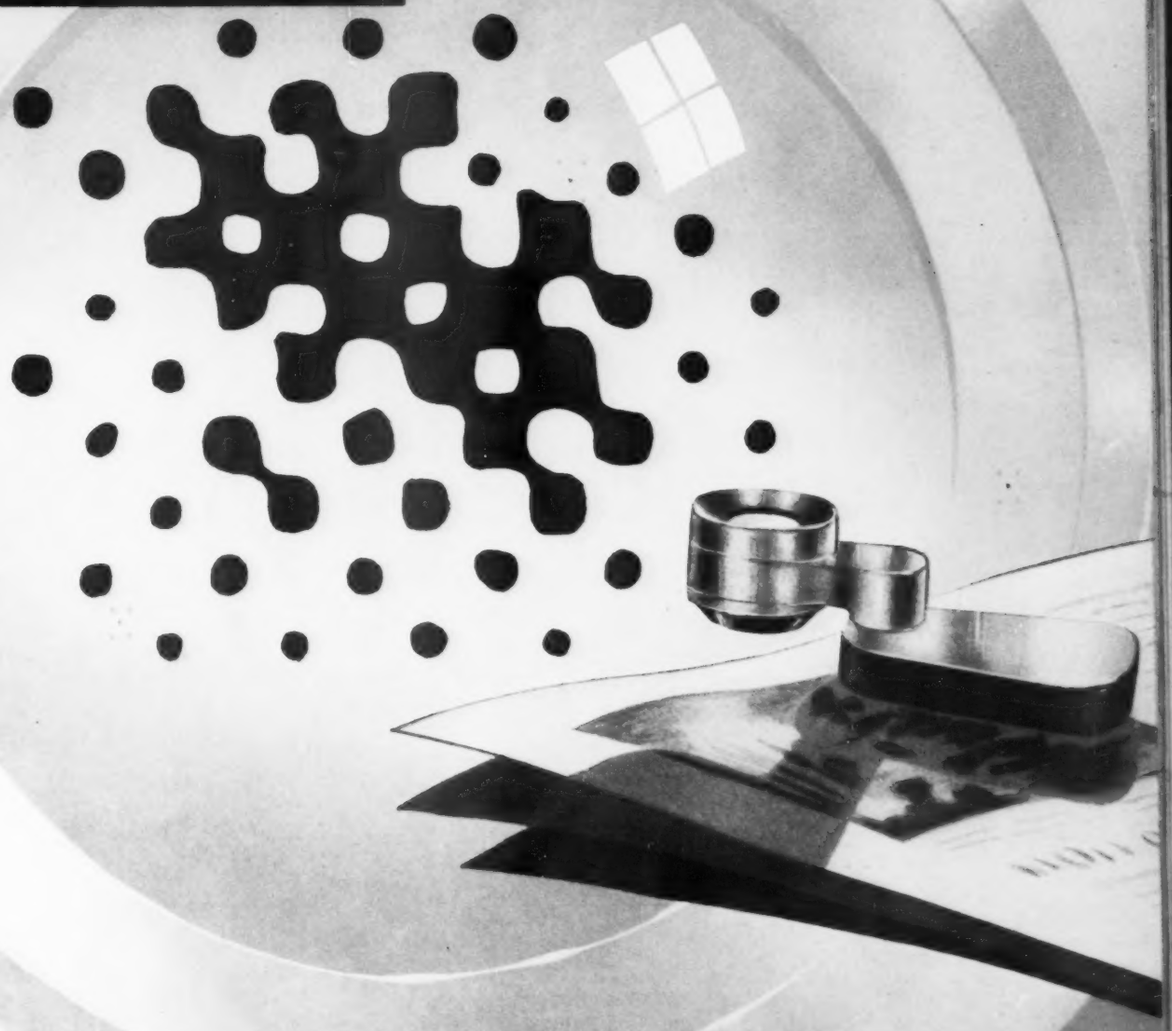
FEBRUARY 1954

PRINTING EQUIPMENT Engineer

Injection Molding of Type Slugs with Thermoplastics—Is It Here?

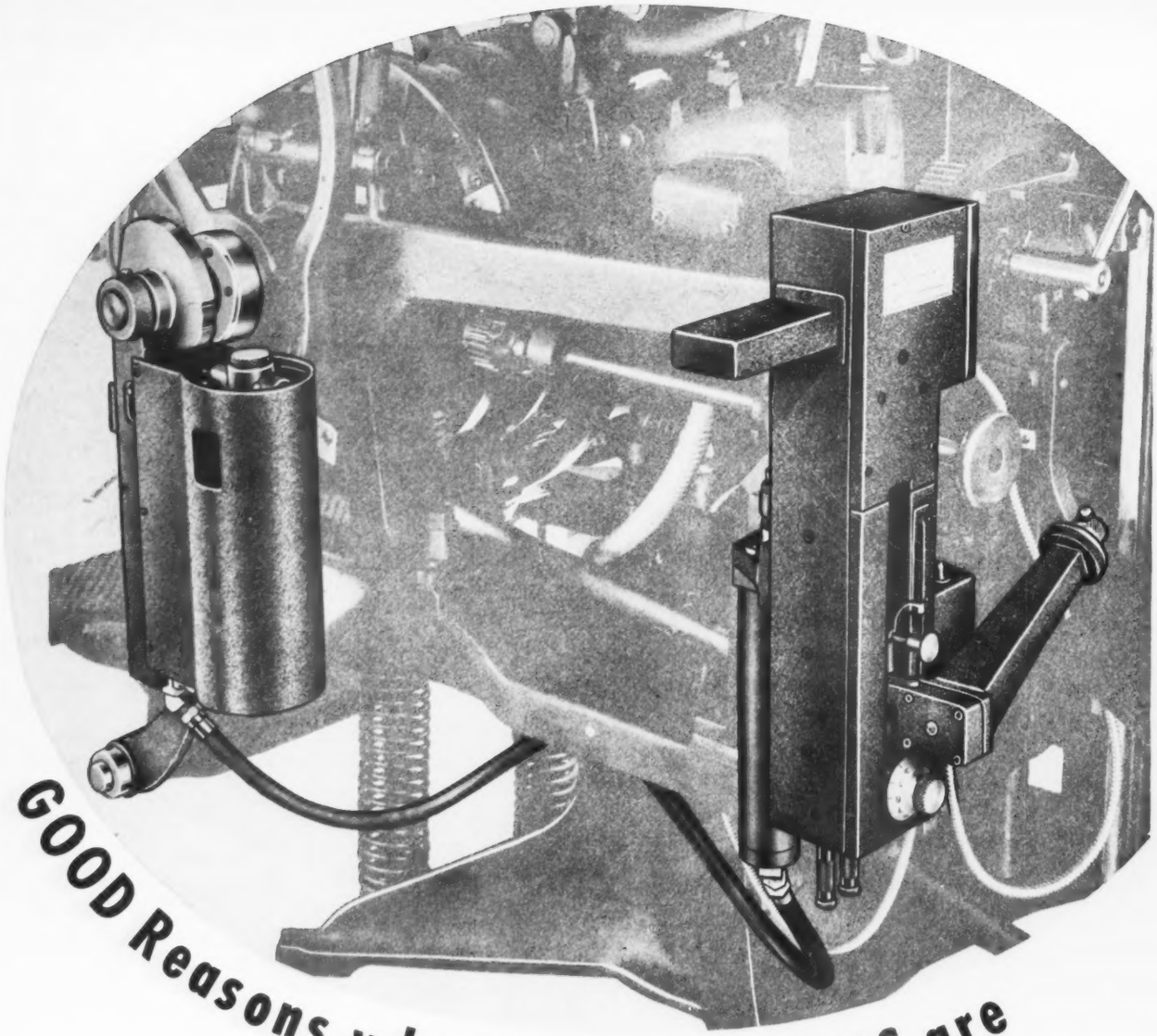
Great Lakes Conference Report

1954 Printing Week Celebrated Nationally



PLEASE ROUTE THIS COPY TO	
Manager	Pressroom Foreman
Production Mgr.	Bindery Foreman
Plant Supt.	Mailing Foreman
Platemaking Foreman	Maintenance Supt.
Composing Foreman	Purchasing Agt.
For filing, please return to	

AN INDUSTRY-WIDE TECHNICAL PUBLICATION



GOOD Reasons why STAR QUADDERS are PRODUCING PROFITS!

Precision TRADE ★ MARK Parts

An "on approval" installation will quickly prove to you that you are actually losing money on your ad alley line casting machines not now equipped with a STAR Quadder. Start the ball rolling by writing now for complete information.

PRECISION
TRADE ★ MARK

LINOTYPE PARTS COMPANY
INCORPORATED
Factory and Main Office
SOUTH HACKENSACK, N. J.
Branch Office: 1327 BROADWAY, KANSAS CITY 6, MO.
CHICAGO • MINNEAPOLIS • DENVER • LOS ANGELES • BOSTON
CANADA: SEARS LTD.

In hundreds of ad alleys, the Star Automatic Quadding Attachment has helped lower costs quickly. Here's why:

ECONOMY FEATURES

- ★ Pays for itself in a year
- ★ Up to 100% greater production
- ★ Eliminates "white space" costs
- ★ Practically no maintenance expense

EXCLUSIVE FEATURES

- ★ Hydraulic actuation
- ★ First and only successful quadder attachment, and over six years of field experience.

. . . AND IT CAN BE APPLIED TO any 30 pica Linotype and Intertype machines, old or new.

- ★ Old quadders of other manufacture can be replaced with the STAR Quadder.

newspaper color

can be produced easier... faster with Sta-Hi's "color combination"

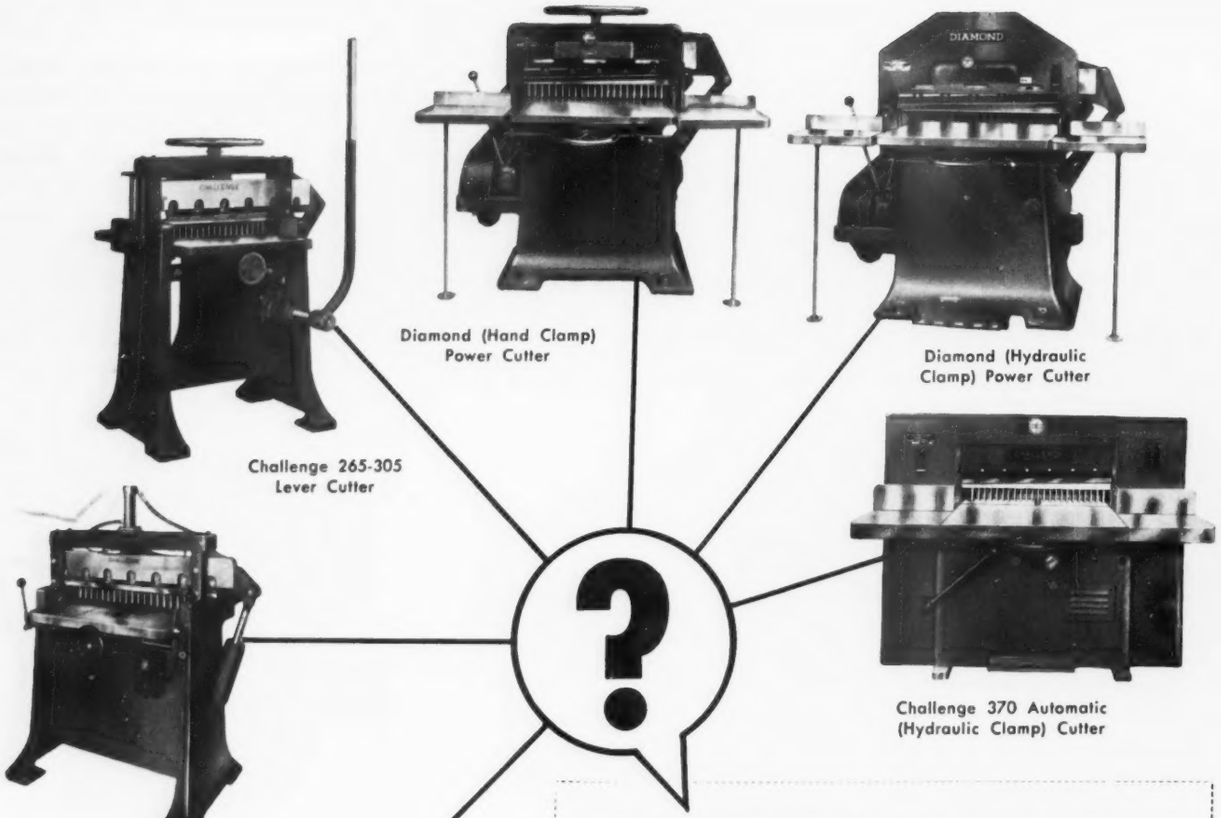
It takes skilled craftsmen and precision machinery, designed especially for the job, to produce top quality newspaper color speedily and economically—equipment like the Sta-Hi Master Router, for accurately routing curved plates with speed and safety . . . the Sta-Hi Master Former, for thoroughly drying and properly forming mats . . . the Sta-Hi Master Trimmer, for accurately registering all mats in a color set to common register marks and uniformly trimming them so that plates cast right, print right

MASTER ROUTER • MASTER FORMER • MASTER TRIMMER • MASTER MATCHER

from the moment they go on the press . . . the Sta-Hi Master Matcher, for assuring the most perfect registration possible by *comparing the actual printing images* of color mats and affixing accurate register marks. ● Progressive plants now operating a Sta-Hi "color combination" (Master Former, Master Router, Master Trimmer) include the Denver Post, Los Angeles Examiner, Los Angeles Times, Tulsa World & Tribune, Washington, D. C., Mercury Press. ● You can *run color more in '54* if you have this Sta-Hi equipment to help you produce it painlessly, profitably . . . We'll be glad to give you the complete story. Just write to Sta-Hi Corporation, Box 152, Whittier, California.

STA-HI ®

. . your best buy


Diamond (Hand Clamp) Power Cutter
Diamond (Hydraulic Clamp) Power Cutter
Challenge 265-305 Lever Cutter
Challenge 265-305 (Hydraulic Clamp) Power Cutter
Challenge 370 Automatic (Hydraulic Clamp) Cutter
Challenge Pony Lever Cutter
?

HOW BIG

IS YOUR CUTTING PROBLEM?

Or put it another way, *"How much time, money and effort are you wasting by overlooking the advantages of a Challenge Paper Cutter?"*

Challenge brings into your plant the results of more than 50 years' experience in the design and manufacture of precision cutting equipment. From lever cutters in bench and floor models . . . to power cutters with hand or hydraulic clamp . . . and the new automatic cutter with hydraulic clamp . . . Challenge superiority is always in evidence. No detail is overlooked to give the operator *maximum protection . . . more working freedom . . .* and *precise control of the cutting operation.*

Choose from 7 popular styles and 6 sizes . . . but choose a Challenge — *the most famous name in Paper Cutters!* See your Challenge Dealer for a free demonstration or write for specific information.

751

THE CHALLENGE MACHINERY COMPANY

Office, Factories and Show Room:
GRAND HAVEN, MICHIGAN

Challenge

TRADE-MARK ®

Over 50 Years in Service of the Graphic Arts

D E A L E R S I N A L L P R I N C I P A L C I T I E S

Can Any Publisher Afford an Obsolete Composing Room?

SCOTT Ideal Matrix Rolling Machines

The Scott Ideal Matrix Moulding Machine rolls any kind of matrix. The form is started under the upper cylinder by the application of a crossed belt drive which permits the cylinder to vary its surface speed between 1″ and 1¼″ without slippage. This drive allows the upper cylinder to find its own float without strain on the matrix. Powerful rolling mill effect and straight line pressure assures easy operation.

With the Scott free moulding cylinders all imperfections are eliminated, thus producing sharp, full depth rolled mats free from mechanical buckling.

Your inquiry regarding these Scott Ideal Matrix Machines is invited.

Buy with Confidence... Buy **SCOTT**

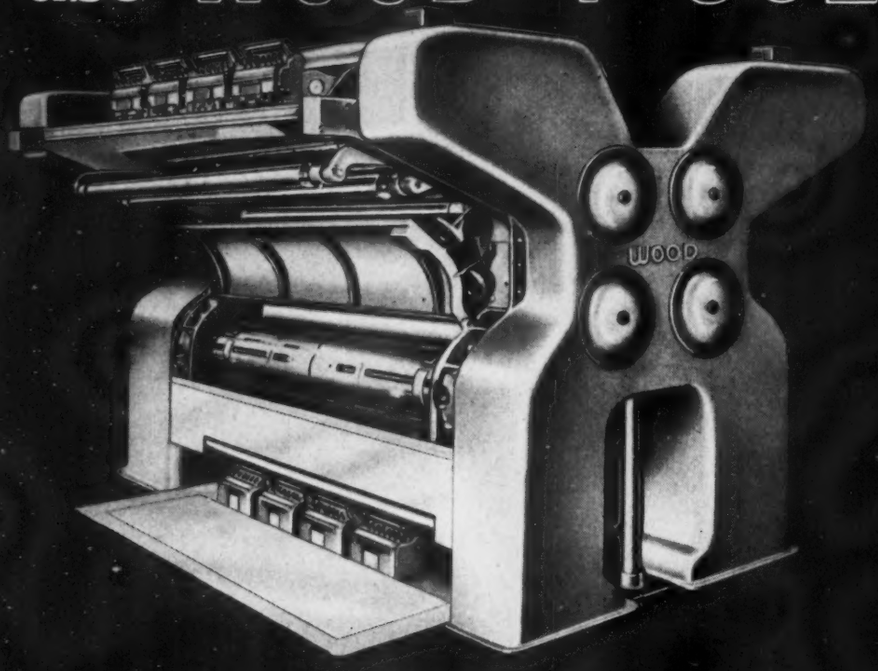
15-L-15

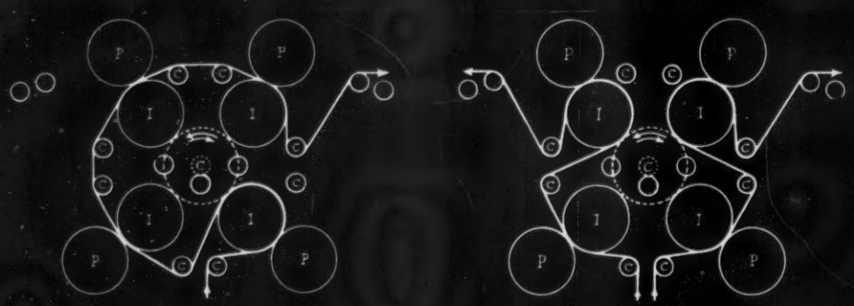
WALTER SCOTT & CO. INC.

PLAINFIELD, NEW JERSEY

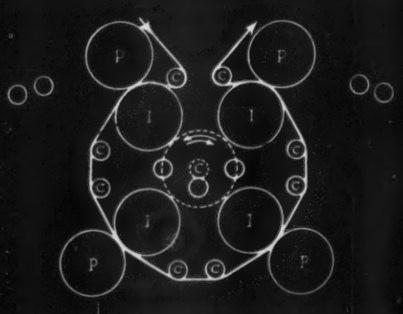
For best results in ROP color printing

use WOOD 4-COLOR UNITS





FEATURES OF THE WOOD
4-COLOR UNIT



Wood

WOOD NEWSPAPER MACHINERY CORPORATION

PRINTING EQUIPMENT *Engineer*

February 1954

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

LEADING ARTICLES THIS ISSUE

Injection Molding of Type Slugs with Thermoplastics—Is It Here? . . 35

Obtaining Line Effects from Photographs 37
By GEORGE JOS. LENZER

Great Lakes Conference 38
By STAFF WRITERS
Non-metropolitan Techniques, 38
Improving Slug Quality in High Speed Operation, 40
Why De-lime Casting Box? 42
By ROBERT M. FRAME
Need for Quality Control Standards and Cooperation, 42
By FERD MIER and LLOYD WRIGHT
Stereo Session Highly Helpful, 43
Mailroom Mechanization Progresses, 74
Composing Session Dominated by Technology, 75
Engravers Call for Teamwork, 77
Human Element in Press Maintenance, 78

1954 Printing Week Celebrated Nationally 44

The PEE Spotlight:
Thomas P. Mahoney, 45
Francis M. Collins, 45

Paper Properties as Related to Printability—IV 46
By WILLIAM H. BUREAU

The ABC of Offset for Letterpress Printers—XIX 49
By GEORGE JOS. LENZER

Books:
Catalog of Fine Paper Specimens and Fine Printing, 52
Management of Printing Production, 52
RS-3 Gone to Press, 52

News Items 54

Goss Opens Modern Plant 58

Patents for Graphic Arts 59

Conference Dates 64

Equipment and Supplies 6
Curves and Circles in Type, 6
Anti-Skinning Agent for Ink, 6
Champlain Roll Label Press, 6
Rouse Improved Plate Saw, 12
Stereo Matrix Remake Cabinet, 12
Flameproof Disposable Towels, 18
Curved Plate Router, 18
Pouring Spout for Small Containers, 18
Offset Blanket Thickness Gauge, 18
Improved Table-Top Collator, 25
Newspaper Supply Catalog, 25
Web Offset Press Bulletins, 25
Powered Hand Trucks, 30
Better Gripper Fingers, 30
Dual Process Press, 32
Steel Racking Stack, 32
Robertson Overhead Cameras, 62
Cairod Heating Catalog, 66
Improved Double-Coated Tape, 66
Photoengraver's Fibre Drain Pipe, 66
Proof Drying Cabinet, 66
Fork Truck Bulletin, 66
Double Wall Galleys, 67
Contact Screens Made, 67
Skin Protection, 67

Volume 84 **Number 5**

PRINTING EQUIPMENT *Engineer*, published monthly at 1276 West Third St., Cleveland 13, Ohio.

Copyright 1954 by Willsea Publishing Co.

EDITORIAL STAFF

MacD. Sinclair, Editor

Adam Henry Reiser
Associate Editor

Edward H. Owen
Assistant Editor

BUSINESS STAFF

Don Will, Publisher

William L. Osborn, Eastern Advertising Representative, 1712 Grand Central Terminal, New York 17, New York. Phone: MUrray Hill 6-5980.

Melburn O. Simmons, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone: DEarborn 2-6467.

George Gell, Central District Advertising Representative, 1276 W. Third St., Cleveland 13, Ohio. Phone: CHerry 1-6645.

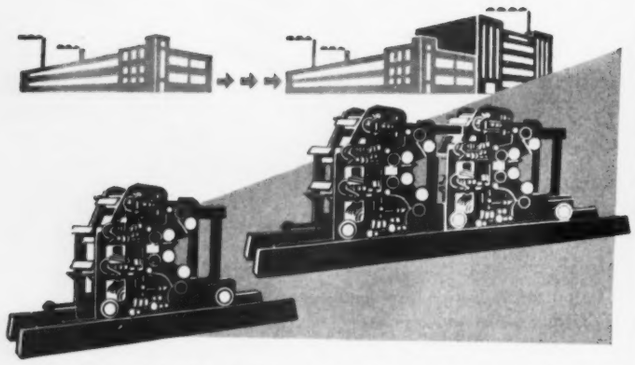
Subscription price per year, $3.50 in advance in U.S.A. Single copy current issues, 35c; feature issue $1 per copy; December Equipment and Supplies Catalog Issue $2 per copy in United States, $2.50 outside of United States. (U. S. Currency). Subscription in foreign countries $4.50 (U. S. currency) in advance. Canadian printing plant mechanical and production executives receiving Printing Equipment *Engineer* under CCA regulations will be charged $1 postage per year in advance to cover additional postage to Canada.

Member Circulation CCA Controlled Audit

Acceptance under section 34.64 P. L. and R., authorized.

Printed in U. S. A.

AN INDUSTRY-WIDE TECHNICAL MAGAZINE



NEW PLANT CONSTRUCTION

allows room for expansion. So does Hess & Barker's Multicolor Rotary Letterpress. You can start with 4 colors on one side or 2 colors on each side and add extra colors on either or both sides up to 4 or 5 on each side as your requirements increase. Sizes start at 19" up to whatever size is best for your work. More colors cost less to print on Hess & Barker's Multicolor Rotary Letterpress. That means lower selling price, increased sales and more profits for you. Roll or sheet delivery. Roll 600 feet per minute, sheets 10,000 an hour.

Write for additional information today

HESS & BARKER

Printing Press and Equipment Manufacturers

212-22 SOUTH DARIEN ST., PHILA. 7, PA.

Telephone: PE nnypacker 5-4070

STOP DRY AIR PROBLEMS WITH NEW

Bahnson Type E Humidifiers

★ Low Cost ★ High Capacity ★ Automatic Control ★ Easy to Install ★ Self Contained—Needs Only Water and Electrical Connections.

Increase your production, insure top quality, by ending costly dry air problems now. Consult Bahnson—makers of the most complete line of industrial humidifiers.

FREE!

Get full information *now*. Ask for Bulletin E-12.

Bahnson COMPANY

ENGINEERS AND MANUFACTURERS

WINSTON-SALEM, N. C.

Equipment and Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

Curves and Circles in Type

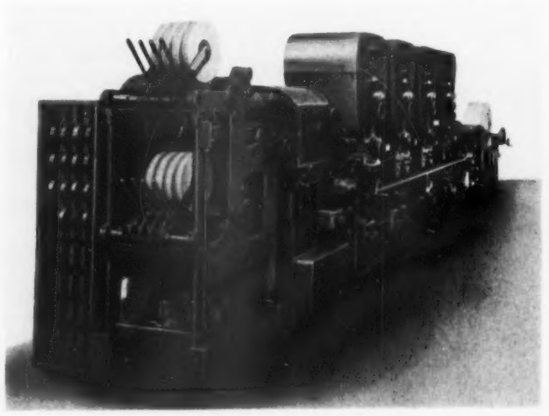
The technique for setting type in circles and curves with the aid of pressure-sensitive tape is shown in a 16 page illustrated booklet. The booklet—reporting on the findings of Bob Reader, Pittsburgh advertising-production man — is available as a service to the printing trade by Minnesota Mining and Mfg. Co. In the booklet are shown Reader's step-by-step methods for using type and strips of Scotch cellophane and double-coated tissue tape to (1) Make a type circle and (2) Make a curve. In addition it shows how the double-coated tape can be used to prevent work-ups and to mount cuts, and how a special cellophane tape can be used by lithographers for opaquing, edging, or stripping negatives. When requesting a copy of this booklet, please mention PEE No. 60.

Anti Skinning Agent for Ink

The Ames Laboratories, Inc., has reported development of a substance called Ink-Sav which chemically prevents skin formation in letterpress, offset and silk screen inks. It may be used for preserving ink in partly-filled cans or press fountains. Sponsor claims the anti-skinning agent is colorless, volatile and will evaporate when the ink is used, leaving no residue.

(*Continued on Page 12*)

New Roll Label Press — The Champlain Co., Inc., announces a new Roll Label Press which, in a single operation, prints, die-cuts, perforates, slits, and rewinds rolls of labels and tags. It is designed especially for printing labels, end seals, tax stamps, wrappers and similar small-size, high-volume items.



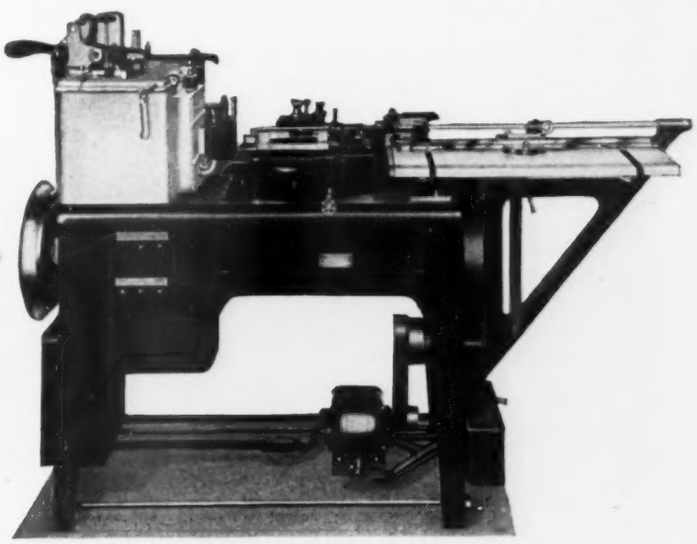
The machine is available with roll-fed flexographic or rotogravure printing units. The die-cutting section receives the web as it leaves the printing unit and is available in two models, E and S.

The E Model cutters are bed-mounted and are extremely fast, according to the sponsor. Constructed of light metals to keep reciprocating weight to a minimum, they reputedly can handle up to 350 i.p.m. at a max. cutting load of 1000 lb. The S Model cutters are made of welded steel and are floor-mounted for heavy duty. Sponsor states the machines can handle 220 i.u.m. at 25,000 lb. max. load. A special heavy-duty model, the HDS-20, is equipped with a load capacity of 30,000 lb. and a max. speed of 200 strokes per min.

These die-cutters also may be used with pre-printed web, in which case a reel carrier and electronically-controlled feed mechanism are available.

Two types of rewinds can be supplied. For most applications, the multiple-spindle type is recommended. This rewind permits winding rolls without stopping the press to unload finished rolls. However, a double shaft rewind (core-type staggered roll) is available if required. For further information, please request PEE No. 53.

Here are aptly illustrated Elrod versatility and its wide range of product—an abundance of leads, slugs, rule border and base material from 1 point to 36 points in thickness—all from a single machine. Simple in design and mechanism, the Elrod consistently delivers an accurate product of high quality that meets exacting modern printing requirements. An Elrod installation in your plant will help to end strip material shortages, with consequent wasteful practices, and assures a continuous supply for most composing room needs. The Elrod is dependable, efficient equipment which has proved itself through the years in hundreds of important printing and publishing plants, to complete satisfaction of the user. Write us for full information as to how the Elrod will help you to lower material production costs and better the output of the composing room in your plant.

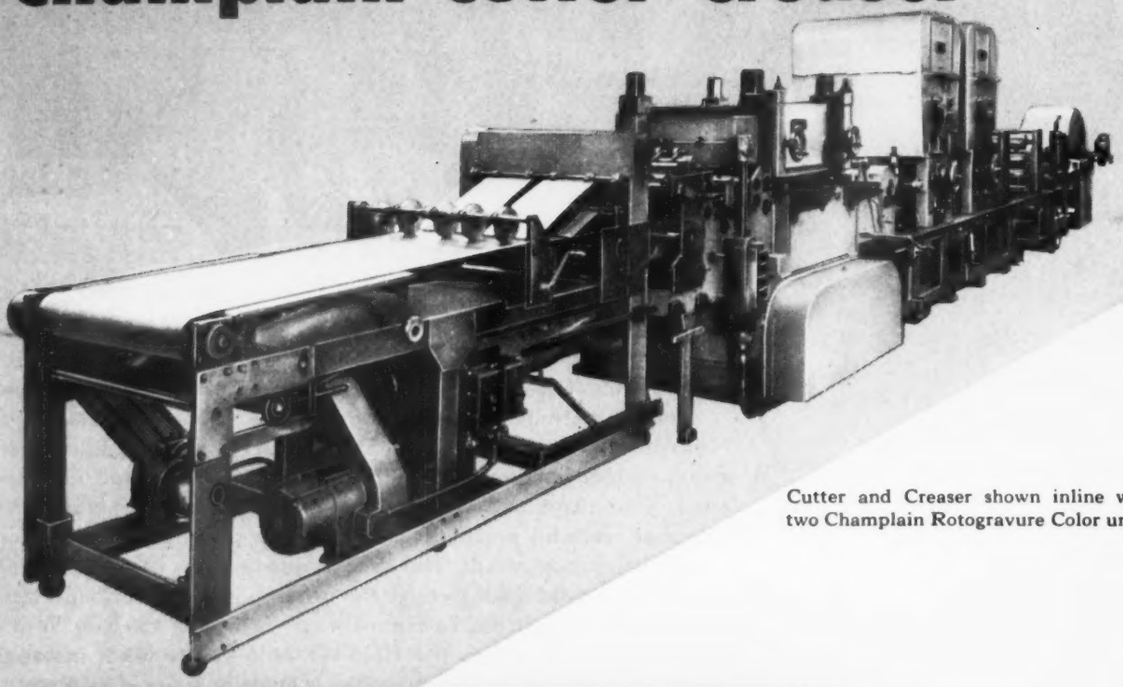


The Elrod

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14

Set in members of the Ludlow Tempo family

From this NEW roll-fed
Champlain Cutter-Creaser



Cutter and Creaser shown inline with two Champlain Rotogravure Color units.

PLATEN PRESS QUALITY CARTONS
at better than cylinder press speeds

At last – a Cutter-Creaser that puts the manufacture of high quality but low-cost cartons well within the reach of *all* carton makers. In *one* pass, it cuts, creases, and automatically strips cartons from a continuous web – and brings to the carton manufacturer all these PLUS advantages:

- **INCREASED PRODUCTION RATE** . . 7,500 to 10,500 impressions per hour.
- **MAXIMUM QUALITY** . . . the high quality of platen press cutting and creasing – at better than cylinder press speeds.
- **THOROUGH *AUTOMATIC* STRIPPING** . . . all intricate internal and interlocked scrap is stripped and carried away *automatically*.
- **LOW DIE COST** . . with inexpensive steel rule and block or jig dies.
- **CONSISTENT ACCURACY** . . patented intermittent feed insures uniform accuracy, even at highest speeds.
- **MINIMUM DOWN TIME** . . changing of dies and make-ready is only a matter of minutes.

By itself, this new Cutter-Creaser has no equal. But when used *inline* with rotary printing equipment – you gain not only the advantages of the Cutter-Creaser but *all* these *additional* advantages:

- **ABSOLUTE MINIMUM HANDLING OF STOCK** . . . "once through the press" principle means no carting and storage between Multi-color Printing, Lacquering, Die-Cutting and Stripping.
- **IMMEDIATE INSPECTION OF FINISHED CARTONS** . . . from roll stock to finished cartons takes only a few seconds.
- **ACCURATE REGISTER** . . . quick, one-pass operation of all inline equipment allows no time for change in character of stock.
- **MINIMUM SET-UP TIME** . . . no die impression needed for printing register—dies and plates are pre-matched.

Champlain

Champlain manufactures a complete line of rotogravure, flexography, rotary letterpress and allied equipment for packaging and specialty printing.

Write today for catalog of Champlain press equipment and full information on the Champlain Cutter-Creaser **Champlain Company, Inc., 88 Llewellyn Avenue, Bloomfield, N. J. Chicago Office: 520 N. Michigan Avenue, Chicago 11, Ill.**

Exclusive Heidelberg Feature!

See what the "Multi-Print" device can do!

ORIGINAL HEIDELBERG

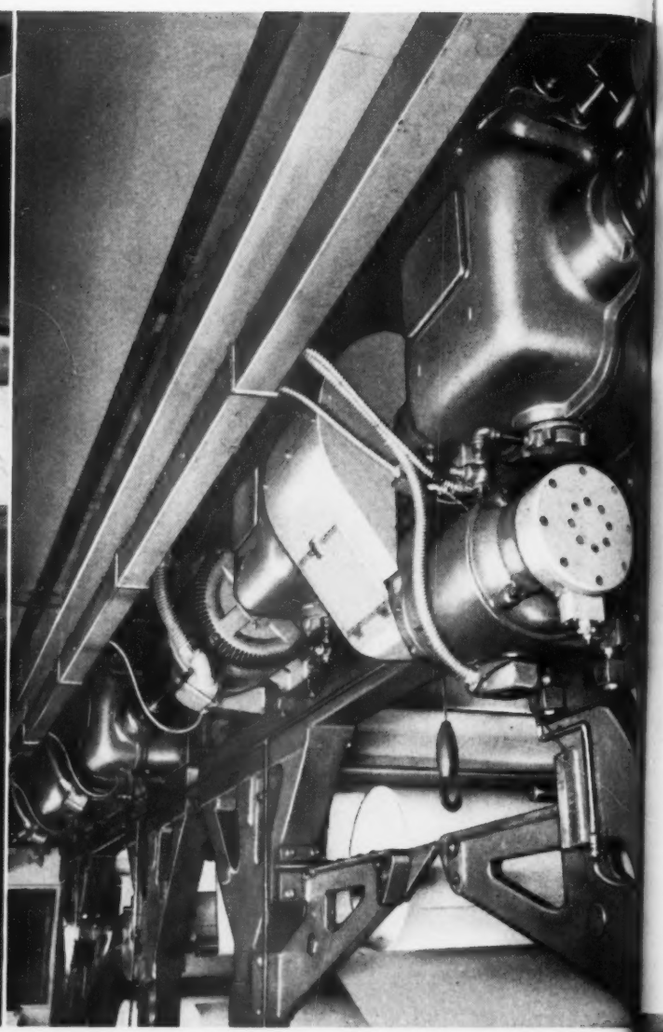
Do as the Newspaper Press

Cutler-Hammer Control System for Unit Drive on

ST. CATHARINES (ONT.) STANDARD

"The equipment was installed locally *without the aid of a Cutler-Hammer erector* . . . is operating entirely satisfactorily. We operated a Duplex Tubular press equipped with Cutler-Hammer for 24 years. Our satisfaction was a major factor in our decision to use Cutler-Hammer for our new press"—W. B. C. Burgoyne, Managing Director.

CUTLER-HAMMER
MOTOR CONTROL
C-H

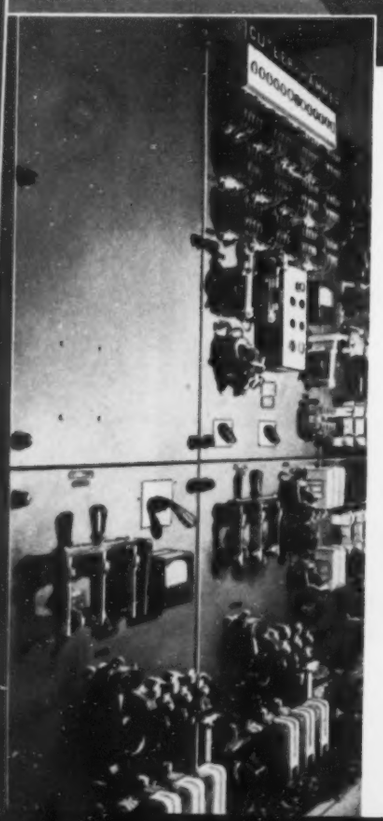


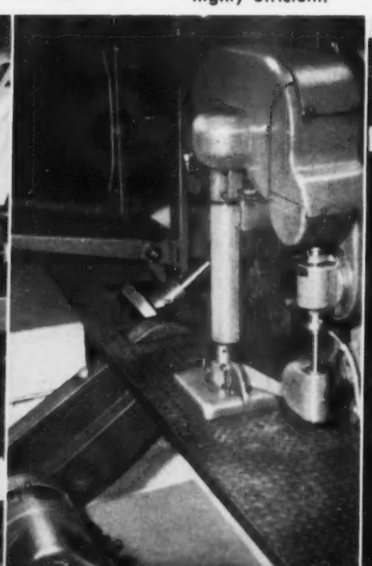
Cutler-Hammer Electronic Control for Single Motor Drive on Goss Tubular Press at

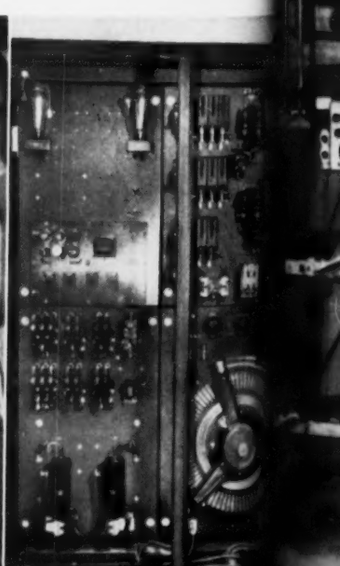
GOSHEN, IND., NEWS DEMOCRAT

One of a series of highly successful Cutler-Hammer Electronic Single Motor Drives on tubular type presses. Simple, dependable, highly efficient.

CUTLER-HAMMER
MOTOR CONTROL
C-H







Designer does

KEEP IT SIMPLE–KEEP IT STURDY

THAT MEANS IN UNIT DRIVE CONTROL

KEEP IT CUTLER-HAMMER

Despite the fact that more and more functions are being designed into modern newspaper presses, the good designer seeks vigorously to simplify his design . . . to get the same results with fewer parts, simpler and sturdier parts. If he *doesn't* do this, he knows he is letting himself, his machine and its user in for trouble.

When it comes to the unit drive for this press, and the control scheme for the unit drive, *troubles compound*—if drive and control are not more simple, more sturdy, more dependable, *more understandable.*

This is hard common sense, the same common sense that leads experienced newspaper men to choose Cutler-Hammer Unit Drive Motor Control for their new presses.

This is a *paired* system, simple, sturdy, trouble-free unit a.c. wound rotor motors *paired* with Cutler-Hammer Unit Drive Control made up of simple, sturdy industrial type control components known to every plant electrician . . . and together giving you the fundamental needs.

Easy inching and threading, smooth acceleration to maximum press running speed, perfect synchronization of motors, long life, freedom from trouble, flexibility . . . all these are yours together with specific Cutler-Hammer superiorities. There's the new C-H cam drum accelerating device with 72 speed points. There's the fact that inching and threading *don't* draw current through the unit drive motors. There's freedom from troubles such as changing load adjusting resistor switches, unbalanced loads, circulating currents and excessive peaks. *And your own electrician can service this drive and can service this control.*

The Cutler-Hammer Representative has a dramatic and compelling story to tell. See him before you buy. CUTLER-HAMMER, Inc., 1460 St. Paul Avenue, Milwaukee 1, Wis.

CUTLER-HAMMER
WEB BREAK DETECTORS

Stop press instantly if web breaks. Web can be rethreaded without latching detectors. Easy to mount.

CUTLER-HAMMER
WEB SEVERING DEVICE

A Cutler-Hammer "original" that has resulted in greater total savings than any other single accessory. It instantly slashes broken web close to impression and guards against destructive wrap-arounds and costly delays—resets automatically.

CUTLER-HAMMER
MOTOR CONTROL
C-H

Cutler-Hammer Control for Press Drive on Hoe Rotogravure Press in plant of

KABLE BROTHERS, Mt. Morris, Ill.

Equipment & Supplies

(Continued from Page 6)

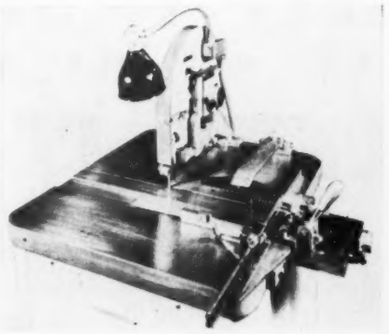
It is further claimed that Ink-Sav chemically combines with driers and prevents them from attacking the ink during storage. Ames Laboratories makes other claims as follows: It will not interfere with the color or drying rate of any ink, contains no wax, will not clog type or fill-in deep-etch offset plates, and will not harm rubber or composition rollers.

Ink-Sav is applied either by spraying on the ink surface or by mixing with left-over inks at proportions of ¼ oz. per lb. of ink. Larger quantities may be needed with inks of greater oil content. Sponsor states it is effective indefinitely in partly filled cans or from one to three days in the press fountain. It is available in 8 oz. bottles with sprayer attachment. Please refer to PEE No. 62 when requesting more information.

Rouse Improved Plate Saw

Several improvements have been announced for H. B. Rouse & Co.'s printing plate saws. One such improvement, according to sponsor, is a sharper skip tooth saw blade. It is further claimed a smoother cut is now made because of greater uniformity of weld on each blade. The cut made by the saw measures 2 pts. or 0.028 in. for cutting between type lines. Ball bearings above and below the cut guide the blade to the cutting spot.

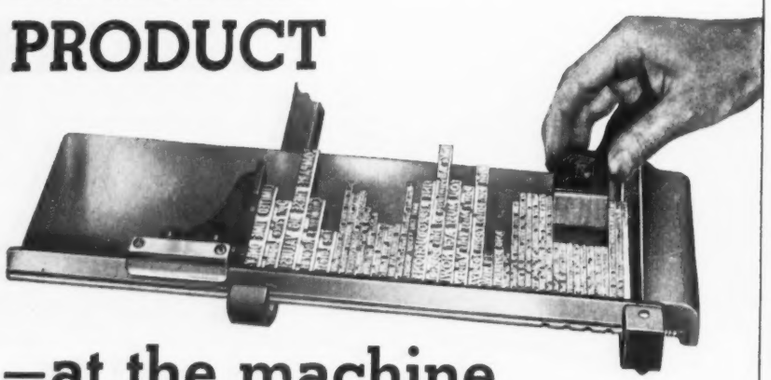
Brass guides with hardened steel inserts position the blade at the sides of the cut. A deadlock secures the sliding gauge



against the main gauge bar providing right angle support for long, narrow plates. A clean cut is claimed in supporting plates on either side of the cutting blade by an extended main gauge bar.

Two models of the saw are available. The 24 in. model is said to cut up to 24 in. of type high work in 27 sec. The 15 in. model (shown here) cuts up to 15 in. of type high work in 17 sec. Mounted on a steel cabinet, both models occupy a floor space of 26 in. by 26 in. A two-color, four page bulletin in which the saw is described is available. For a copy of this bulletin, please mention PEE No. 42 in your request.

FINISHED PRODUCT



—at the machine

Each slug drops to the galley of a Mohr Saw-equipped Linotype or Intertype accurately sawed to length—ready for immediate use "as is."

The finished product is instantly available. Any odd measure matter can be sawed to length right at the machine—run-arounds, initials, contours, ad-guts, job work, corrections.

Just set the Mohr Saw dial at 10 picas, 20 picas, 25 picas 3 points—or to any measure. The slug is sawed automatically, instantly, accurately.

Save liner changes, reduce liner investment and expense. Cast slugs to a standard 30 picas and automatically saw them to length. On combination machines a liner can be used for text, while retaining the flexibility of the full 30 picas for display.

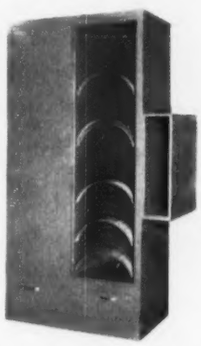
Thousands of Mohr Saws are saving time and money in composing rooms all over the world—daily newspapers, weekly newspapers, job plants and trade plants. If you have slugs to saw—whether for one or one hundred line casting machines—the Mohr Saw is a real money-maker.

Learn the complete story of the Mohr Saw.
Write for the free booklet "Any Measure."

MOHR LINO-SAW COMPANY

126 North Union Ave., Chicago 6, Illinois

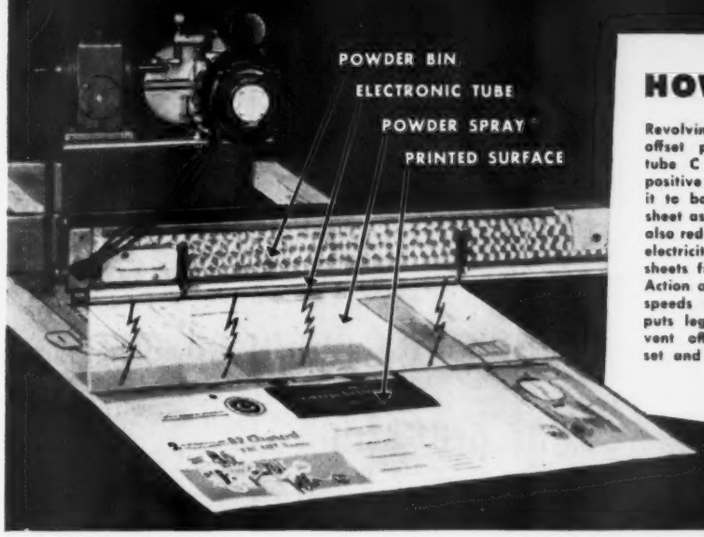
Stereo Matrix Remake Cabinet for temporary storage of stereotype mats has been developed by Hansen Metal Products Co. There are two sliding doors, one of which has been moved aside to expose one of the two mat storage tiers. The mats may be stored temporarily in the heated and air-circulated cabinet in their naturally curved position until all need of possible remakes of stereotype plates has passed, or until the press run has been finished. Maintaining mats in this condition permits casting plates with normal printing face quickly in case a plate is to be remade. The cabinet is fabricated with sheet steel walls with spun wool insulation between. A thermostat keeps the temperature regulated through electric strip heating elements at 150 deg. F. The inner steel partition is perforated to assure that the fan will distribute the air evenly through both compartments. The cabinet can be built to customer requirements. The one shown is supplied with 59 curved compartments in the left tier. There are 32 compartments in the right-hand tier with 15 double compartments for four-color mats. In the cabinet illustrated, the fan blower is contained within the lower compartment. Cabinets will be built with the blower compartment at the top to permit easier access to mats by the stereotyper. Dimensions of the cabinet shown are: 40 in. wide; 80 in. high; 22 in.



(Continued on Page 18)

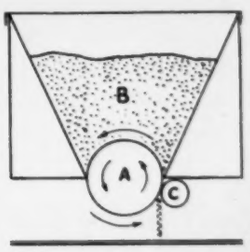
OXY-DRY

THE MOST EFFICIENT OFFSET PREVENTION METHOD



HOW OXY-DRY OPERATES

Revolving shaft A distributes anti-offset powder B past electronic tube C which gives 10,000 volt positive charge to powder causing it to bond instantly across entire sheet as it is delivered. This action also reduces negative charge (static electricity) in paper which frees sheets from sticking and jamming. Action of ozone emitted from tube speeds oxidation of ink, powder puts legs between sheets to prevent offset and permits inks to set and dry thoroughly.



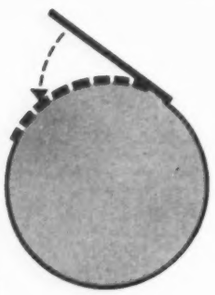
ONLY OXY-DRY GIVES YOU ALL THESE ADVANTAGES

- **Uniform offset prevention on all types of work**
- **Positive powder control—with new micrometer speed adjustment**
- **Elimination of static electricity from sheets permits easy flow of work**
- **Fast drying of ink and uniform, full, free flowing loads**
- **Time and labor saved from cleaner, more efficient operation**
- **No dust hazard—powder is fully-endorsed health factor**

NEW

OXY-DRY rollers are now furnished with positive powder control etched surface. Eliminates "down-time" for costly labor time sanding, permits operation of sprayer for far longer time without service of any kind except to refill with OXY-DRY powder... one of a parade of improvements you can expect only from OXY-DRY research and development.

Scan-a-gravings can be mounted while the cast is on the press. Double-faced Scotch tape holds the plastic cut securely.



Direct printing from flexible Scan-a-gravings gives sparkling halftones. Late cuts don't hold up the stereo room

SCAN-A-GRAVINGS

improve reproduction quality

. . . cut presstime rush

Direct printing from Scan-a-gravings assures clean, sharp reproduction of editorial or advertising illustrations. None of the detail is lost in mats or stereos. These plastic cuts are mounted on the stereo just as they come from the Scan-a-graver.

Last minute presstime rushes because of late cuts are eliminated when you're using Scan-a-gravings. Stereos are cast with blanks in the form and can be delivered to the pressroom in an even flow—rather than being held up for lack of cuts. When the cuts arrive from the Scan-a-graver they can be mounted on the stereo, right on the press if necessary. Changes in illustrations can be made at any time, giving a further saving of time in the back shop.

When cuts are late, lock up forms with blank bases in position; Scan-a-gravings are easy to mount on stereos and give better reproduction.

● *Thousands of daily and weekly newspapers are now printing direct from Scan-a-gravings for better quality reproduction. Get the full story about the Scan-a-graver and learn how it can help solve some of your mechanical problems by writing today to Fairchild Camera and Instrument Corporation, Syosset, Long Island, New York, Department 100-70E.*

FAIRCHILD

SCAN-A-GRAVER

Reading time : 58 seconds

Subject: COST REDUCTION IN THE COMPOSING ROOM

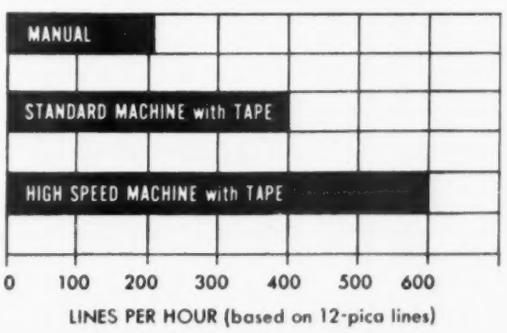
There isn't much you can do about the price of newsprint. But TELETYPESETTER can help you cut your typesetting costs by as much as 40%!

The method is based on a successful industrial technique of separating a *single complex operation* into two or more *simpler operations.*

TELETYPESETTER breaks down the single manual typesetting operation into (1) Punching Tape and (2) Automatic Typesetting.

The result nearly doubles the output of your standard linecasting machines and triples the output on high speed machines.

LINECASTING MACHINE OUTPUT



But that's only the beginning. TELETYPESETTER permits you to employ your linecasting machines with a flexibility unheard of before.

For instance, with TELETYPESETTER you can perforate tape during the day and let that tape run your composing machines automatically at night. Since tape can be perforated at extremely high speeds, a good deal of overtime can be eliminated.

Then, too, if floor space is at a premium and more type is needed, a TELETYPESETTER automatic linecasting system is the obvious answer. It will give you approximately twice as much type from your standard composing machines and three times as much type from your high speed linecasting machines.

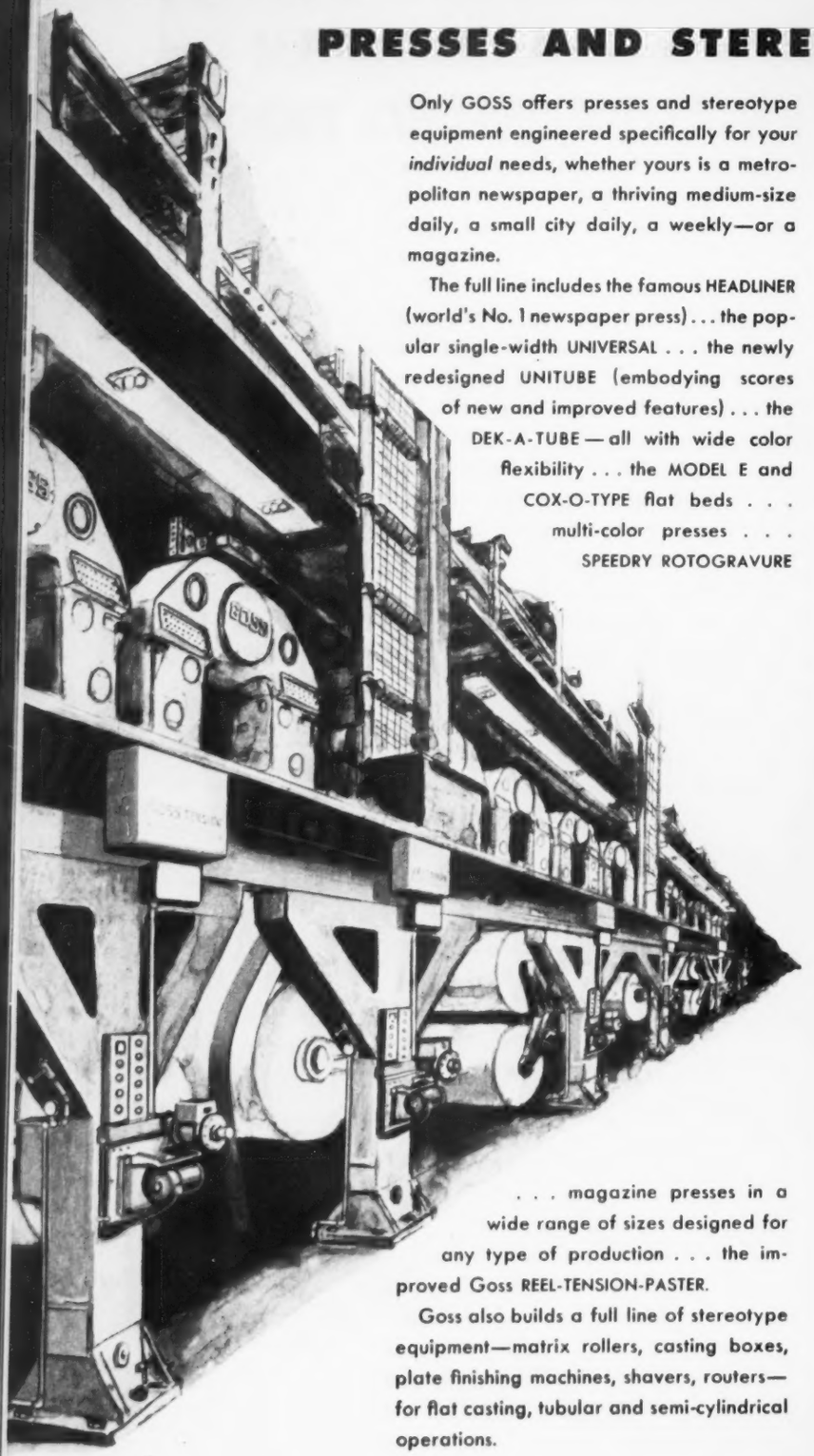
Your own situation will undoubtedly suggest other TELETYPESETTER economies. Over 1,200 publishers have already found TELETYPESETTER to be a remarkable money-saver. Among them are many weeklies, two of which have less than 850 circulation.

We realize we've only been able to skim the surface here. For full information, write to Teletypesetter Corporation, Dept. PE2, 2752 North Clybourn Avenue, Chicago 14, Illinois.

TELETYPESETTER

COMPLETE

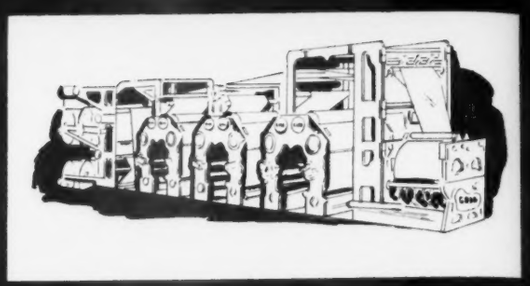
PRESSES AND STEREO

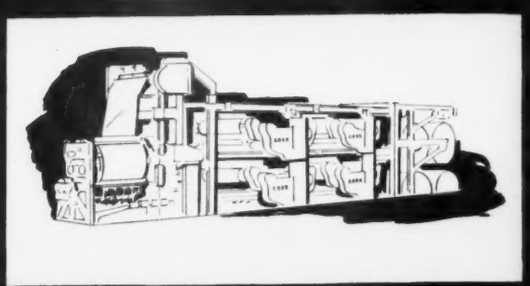


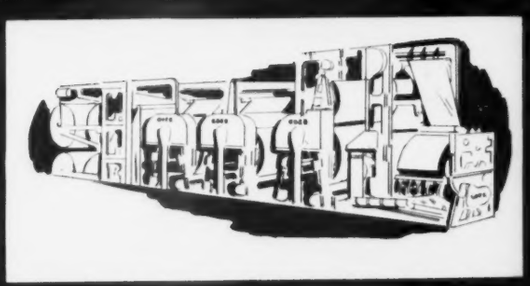
Only GOSS offers presses and stereotype equipment engineered specifically for your *individual* needs, whether yours is a metropolitan newspaper, a thriving medium-size daily, a small city daily, a weekly—or a magazine.

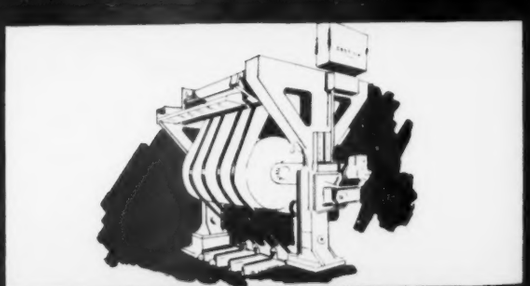
The full line includes the famous HEADLINER (world's No. 1 newspaper press) . . . the popular single-width UNIVERSAL . . . the newly redesigned UNITUBE (embodying scores of new and improved features) . . . the DEK-A-TUBE — all with wide color flexibility . . . the MODEL E and COX-O-TYPE flat beds . . . multi-color presses . . . SPEEDRY ROTOGRAVURE . . . magazine presses in a wide range of sizes designed for any type of production . . . the improved Goss REEL-TENSION-PASTER.

Goss also builds a full line of stereotype equipment—matrix rollers, casting boxes, plate finishing machines, shavers, routers—for flat casting, tubular and semi-cylindrical operations.









THE GOSS PRINTING PRESS COMPANY

5601 West 31st Street • Chicago 50, Illinois

220 East 42nd Street
New York 17, New York

55 New Montgomery Street
San Francisco 5, California

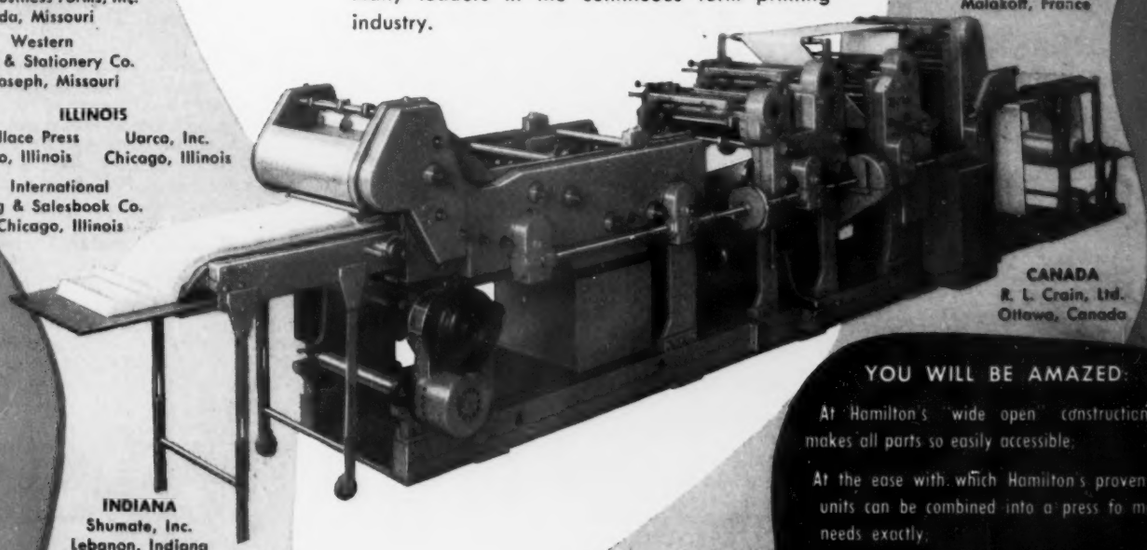
London and Preston, England

WORLD'S LARGEST MANUFACTURER
OF NEWSPAPER, MAGAZINE
AND ROTOGRAVURE PRESSES

HAMILTON 22" x 22" one color offset press with reversible rubber printing and face imprinting, face numbering, two punching machines, two cross perforators and length slitting and length perforating. Press also incorporates roll rewinding and zig-zag fold delivery. Zig-zag fold delivery shown.

HAMILTON
WEB PRESSES
CHOICE OF PRINTERS
EVERYWHERE!

The sound judgment which you exercise when you select a Hamilton Web Press is endorsed by many leaders in the continuous form printing industry.



ARKANSAS
"Art-N-Sets," Inc.
Little Rock, Arkansas

GEORGIA
Ivan Allen Company
Atlanta, Georgia
Retail Credit Corporation
Atlanta, Georgia
Montag Brothers, Inc.
Atlanta, Georgia

MASSACHUSETTS
Philip Hano Company, Inc.
Holyoke, Massachusetts

MARYLAND
The Baltimore Salesbook Co.
Baltimore, Maryland

LOUISIANA
Thos. J. Moran's Sons, Inc.
New Orleans, Louisiana

MICHIGAN
Rotary Forms Press, Inc.
Detroit, Michigan

TEXAS
Ennis Tag & Salesbook Co.
Ennis, Texas
The Rain Company
Houston, Texas

PENNSYLVANIA
The Reyburn Mfg. Co., Inc.
Philadelphia, Pennsylvania
The Standard Register Co.
(Atlantic Division)
York, Pennsylvania
Stephen Greene Company
Philadelphia, Pennsylvania

NEW JERSEY
Merck & Company, Inc.
Rahway, New Jersey
National Systems & Forms Company, Inc.
East Rutherford, New Jersey

FLORIDA
The M. G. Lewis Printing Co.
Jacksonville, Florida

CALIFORNIA
H. S. Crocker Company, Inc.
Los Angeles, California
Sunset-McKee Company
Oakland, California

ALABAMA
International Paper Company
Mobile, Alabama

NORTH CAROLINA
Standard Business Forms, Inc.
Gastonia, North Carolina

MISSOURI
American Business Forms, Inc.
Nevada, Missouri
Western
Tablet & Stationery Co.
St. Joseph, Missouri

ILLINOIS
The Wallace Press
Chicago, Illinois
Uarco, Inc.
Chicago, Illinois
International
Tag & Salesbook Co.
Chicago, Illinois

NEW YORK
G. A. Ackermann Printing Co.
New York, New York
Elliott Ticket Company, Inc.
New York, New York
James F. Newcomb Co., Inc.
New York, New York
Vue-Fax Corporation
New Cassel, Westbury, N. Y.
Wilcox Press, Inc.
Ithaca, New York

SWEDEN
Aktiebolaget Fredr. Wagner
Malmo, Sweden

FRANCE
Perino-Guyot & Cie
Malakoff, France

CANADA
R. L. Crain, Ltd.
Ottawa, Canada

INDIANA
Shumate, Inc.
Lebanon, Indiana

OHIO
The Egry Register Company
Dayton, Ohio
The W. S. Gilkey Printing Co.
Cleveland, Ohio
The Standard Register Co.
Dayton, Ohio
The National Cash Register Company
Dayton, Ohio and
Washington Courthouse, Ohio
The Stearns & Foster Co.
Cincinnati (Lockland), Ohio
The Hamilton Autographic Register
Hamilton, Ohio
Premier
Southern Ticket Co., Inc.
Cincinnati, Ohio
The Shelby Salesbook Co.
Shelby, Ohio
The Rotary Printing Company
Norwalk, Ohio
The Miami Systems Corp.
Cincinnati, Ohio
The Reynolds & Reynolds Co.
Dayton, Ohio

YOU WILL BE AMAZED:

At Hamilton's "wide open" construction which makes all parts so easily accessible.

At the ease with which Hamilton's proven standard units can be combined into a press to meet your needs exactly.

At Hamilton's "fast start" on important jobs because of no make ready.

At the increased production achieved when all operations are performed in a single press run.

At the high speed and extra precision of the Hamilton Press, which assures you that your form printing business will be profitable.

The press you buy will be a vital part of your operation for many years to come. Make your competitive position secure by investing in a Hamilton Web Press.

BUSINESS FORM MACHINERY — PRECISION

Send for Hamilton Web Press Bulletin No. 5337
or submit your specifications for proposal NOW!

The HAMILTON TOOL COMPANY
810 HANOVER ST., HAMILTON, OHIO

Equipment & Supplies

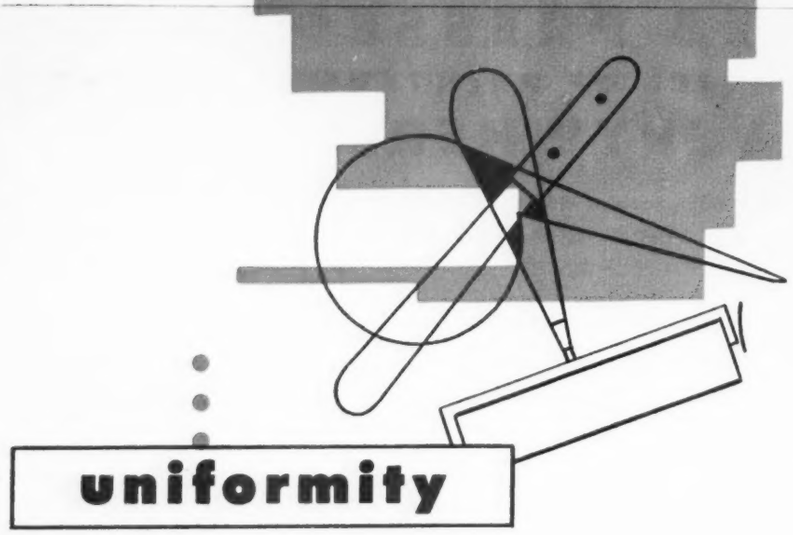
(Continued from Page 12)

deep. Stop rods at the back prevent pushing the mats too far into the cabinet. Further information will be furnished but please mention PEE No. 64 in your request.

Flameproof Disposable Towels

Leshner Corporation has announced a process to flameproof an all-cotton disposable towel for industrial use. According to B. J. Petricoff, President of the Leshner firm, the cotton towel will reduce wiper costs as much as 50%. He said the fire-resistant treatment will remove the major objection of some plants in using cotton towels. It is claimed the Leshner towel absorbs more than six times its own weight in grease, oil or water and may be used for wiping, polishing, cleaning and other industrial needs.

Other advantages claimed by the company are that all towels are uniform in size, quality and weight; may be used wet or dry; eliminates hazards of grease soaked rags; and are sanitary. The towel is available in pastel and dark shade colors and white; size is 12 in. by 18 in.; and may be obtained to meet individual specifications. Please request PEE No. 56 for further information.



uniformity

INKS OF UNVARYING COLOR
INKS OF CONSISTENT BODY
INKS OF EVEN TACK

THESE are the superior, uniform inks of Sinclair and Valentine. No matter what your printing stock—whether it's a coated paper, Kraft, plastic or any other—there is a Sinclair and Valentine ink made especially for your purpose, an ink whose changeless quality is your guarantee of consistent results on every job. This dependable performance not only means a more economical press operation, but it also assures you and your customers of superior quality reproductions.

Sinclair and Valentine Co.

Main Office and Factory: 611 West 129th St., New York 27, N. Y.

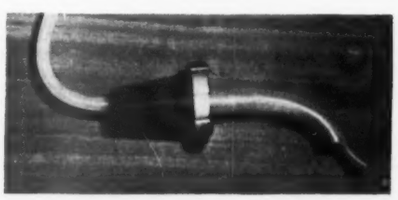
OVER 35 BRANCH OFFICES

SERVICE FROM COAST TO COAST

Curved Plate Router

Designed especially for photoengravers and large printing plants using rotary press equipment is the 1954 model Multiform Curved Plate Router, reported by

J. A. Richards Co. The machine is equipped with a ball bearing spindle with single belt drive to a standard motor. Sponsor claims this feature enables a close coupling between the motor and spindle for eliminating power loss through long drive belts. The drive also enables the operator to select any motor voltage desired. Head rails are hardened and ground with ball bushings which eliminate drag. The units are available in two models: the Model M-1B for tubular plates and the Model M-2B for semi-curved plates. It can also be provided with cylinders of two diameters. Please request PEE No. 63 if you wish additional information.



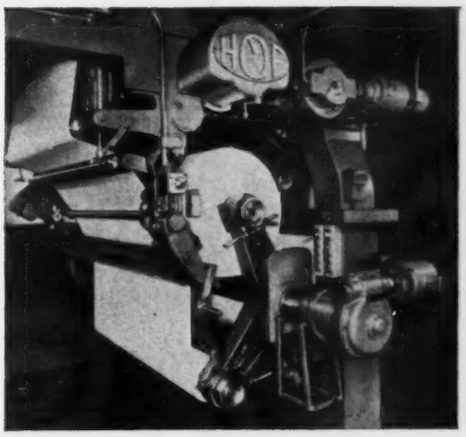
Pouring Spout for Small Containers — General Scientific Equipment Co. has announced a vented pouring spout designed for safe pouring of liquids into smaller containers. The spout fits bottle openings from 1 in. to 1⅝ in. and has a flow capacity of slightly more than 1 gal. per min. Sponsor states the device assures a smooth flow without spurts or splashes. The unit is made of acid-resistant rubber and plastic tubing. For additional details, please mention PEE No. 55 in your request.

Offset Blanket Thickness Gauge

An instrument for measuring the thickness of offset blankets in gradations of 0.0005 in. is the subject of a two-color, four page bulletin prepared by the Litho-

(Continued on Page 25)

the outstanding choice OF PROMINENT PUBLISHERS



for nonstop production is the* HOE FULL-SPEED WEB-SPLICING MECHANISM, *of which more than 800 units have already been installed.

With the turn of a switch the web is spliced.

Each unit consists of a HOE three-arm reel, running belt automatic tensions and electrically operated paster, with all controls outside the press — insuring maximum safety and convenience for the pressman.

High-volume production can be maintained without interruption, since there is no reduction in operating speed while splicing. And paper wastage is held to a minimum.

Simple and rugged construction insures low maintenance.

Not only is this equipment used with HOE Newspaper, Rotogravure, Magazine, Multi-Color and Web Offset Presses, but also with many presses of other makes.

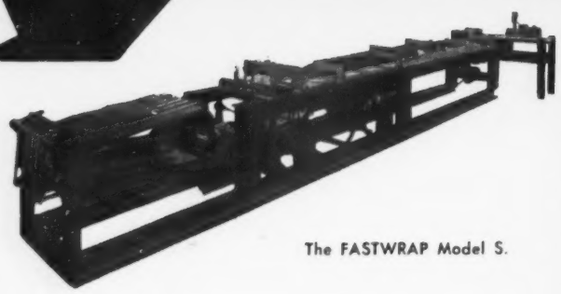
R. HOE & CO., INC.

910 East 138th Street • New York 54, N. Y.

BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.

26 TIMES FASTER than HAND-WRAPPING

...the High-Speed Magnacraft Way

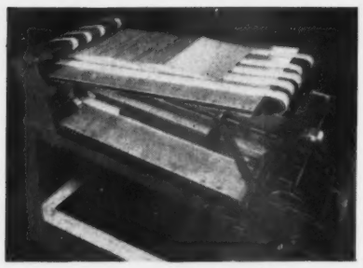


The FASTWRAP Model S.

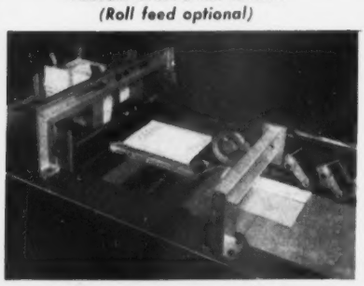
FLAT-WRAP FOLD-WRAP BAND-WRAP

Time saved is money earned. Magnacraft's FAST-WRAP saves T-I-M-E. It is 26 times faster than hand wrapping . . . a fact established by many actual tests. That's tremendous saving over old fashioned methods. And what's more, your magazines are wrapped tighter, better, and more attractively than ever before. If you are not wrapping now, for just a fraction of a cent more for each issue you can send out a neatly wrapped magazine. Get the full facts about the FASTWRAP . . . find out for yourself how this modern machine can cut YOUR costs . . . reduce your mailing time . . . and spur the efficiency of your mailing room. Write us today.

Magnacraft MFG. CO.
3138 West Chicago Ave. Chicago 22, Ill.



Vacuum drum sheet feeder. (Roll feed optional)



Hopper type magazine feeder for continuous loading.

Folding flares easily adjusted for any size magazine.

MANUFACTURERS OF HIGH-SPEED PERIODICAL WRAPPING MACHINES

Hundreds of pressroom foremen can't be wrong!

Foremen in hundreds of the country's biggest, busiest pressrooms always put their papers to bed with Vulcan Blankets.

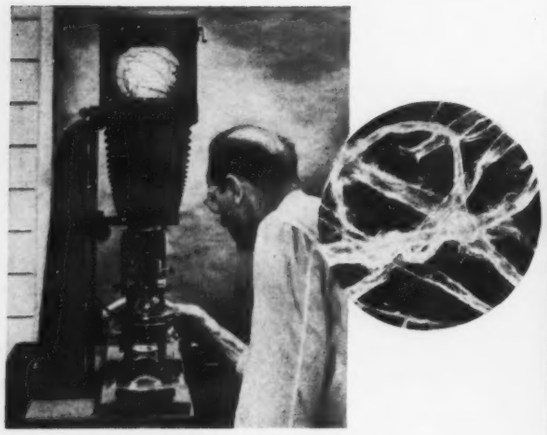
Ask them "Why?", and they say: *"Vulcan lasts months longer" . . . "Less fussing when it's time to re-blanket" . . . "We get sharper reproduction of half-tones, solids, and small type areas" . . . "Vulcan keeps our old presses humming like new."*

And these same foremen insist on Vulcan blankets for color work. They report Vulcan gives them longer runs with no impression troubles . . . a crisp, cleanly-printed color page every time. Ask a Vulcan representative to show you proof of Vulcan superiority.

Meet Gene Albert. Gene has been helping pressmen solve blanketing problems for years. In New England, write: Gene Albert, Hamilton Drive, Madison, Conn. Elsewhere, write: Vulcan, 54 Worth Street, N. Y. 13, N. Y. for name of local representative.

Vulcan RUBBER PRODUCTS, INC., *54 Worth Street, New York 13, N. Y.*

Manufacturer of Vulcan-Duroflex products • A subsidiary of Reeves Brothers Inc.



IT'S IN THE FIBRE: At Champion Paper and Fibre Company's Research Department, a scientist examines cellulose fibres, from which paper is made. Inset shows fibres magnified 100 times actual size. Four-color picture story in HUBER NEWS shows how research leads to better paper for the future.

A TRIUMPH OF RESEARCH brought about the wider use of southern pine. Previously thought suitable only for paper bags, southern pine is now a source of pulp for printing papers. See the colorful story in HUBER NEWS.

How search and research improve the basic tools of the graphic arts

Four-color Huber News tells behind-scenes story

Ever stop to think how much behind-the-scenes scientific work, how many lab tests and processes are needed to produce the sheet of paper you are reading? In the new HUBER NEWS you will go into a leading paper mill to see how laboratory skills give birth to actual production. Photographs reproduced in Huber four-color process inks will take you to Research Department and operating plant, where some of the paper industry's major advances are made.

Research and development are a continuing job at Huber, too. Beginning on page 14, you'll read how a new method of packaging carbon black—basic ingredient of publication inks—is bringing about storage savings of 25% for Huber customers.

And you won't want to miss the eye-opening story, "Death on Wheels." Profusely illustrated, it's full of *do's* and *don't's* that may well save you from a fatal traffic accident.

Write for your free copy of HUBER NEWS. There are 24 pages in this issue.

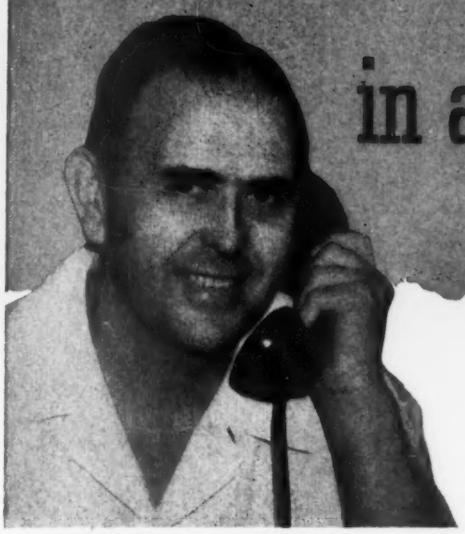
NEW LOOK FOR HUBER CARBON BLACK—basic ingredient of publication inks. Huber Packaging Engineers developed a method of shaping a valve-type bag to make it flat and compact *(left)*, as compared with bulky, conventional bag. Read how a long-time headache was cured.

GUARANTEED TO KILL is this bad practice of passing at intersections. You'll get valuable hints on staying alive on the road in the latest HUBER NEWS. Write for your copy.

J. M. HUBER CORPORATION
INK DIVISION
HUBER 1478 Chestnut Ave., Hillside, N. J.
Hillside and Bayonne, N. J., Chicago, McCook and St. Louis, Ill., Borger, Texas, Boston, Mass. St. Louis, Mo.

HUBER PRODUCTS IN USE *SINCE 1780*

What would you look for in a job cylinder press?



Mr. E. W. Schergens, past President of the Hoosier State Press Association, is Associate Editor of The Tell City News and Secretary-Treasurer of the News Publishing Co. of Tell City, Ind. He is also National Editorial Association Director representing Indiana, Illinois, Michigan and Wisconsin.

Here's how a midwestern newspaper publisher answers that question:

"The small job printing plant of a weekly newspaper such as ours is confronted with every kind of job. So *versatility* is the most important requirement for any press we buy.

"It must be able to handle both short and long runs economically, take sheet sizes from postcard to 12 x 18", have quick getaway and changeover from one job to another. Ink coverage must be adequate for large heavy blacks."

Now here's how the ATF Little Giant 6 measures up to Ed Schergens' check-list:

Versatility: ATF Little Giant runs halftones, solids, 4-color process work, ruled forms, all with equal ease.

Economy: ATF Little Giant prints at lowest cost per thousand impressions of any press in its size range.

Sizes: ATF Little Giant handles a 3¼" x 5½" up to a 12" x 18" sheet, generally 80% of run-of-the-hook work.

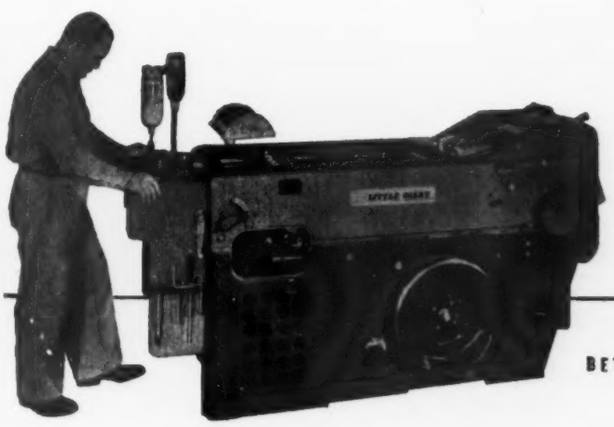
Getaway: Quick getaway is possible as ATF's Little Giant requires fewer feeder gripper and air adjustments than other presses of its size.

Changeover: Adjustments for job changeover are kept to a minimum on ATF's Little Giant 6. Form changes can be made right on the press.

Ink Coverage: Three form rollers assure more inches of ink travel and breakup than any on any other press of its sheet size.

• • •

Find out for yourself—check the Little Giant on these same points, and against any other press of its sheet size. We'll be glad to give you the full story on the ATF Little Giant 6. Write AMERICAN TYPE FOUNDERS, *a subsidiary of Daystrom, Inc.*, 200 Elmora Ave., Elizabeth, N. J.



Type faces shown are: Tower, Stymie Medium, Century Bold Italic, Century Expanded, Alternate Gothic No. 1.

ATF

BETTER, MORE PROFITABLE PRINTING
FROM THE WIDEST LINE OF PROCESSES...
GRAVURE...LETTERPRESS...OFFSET

This machine hunts for—and finds—dead center!

This De Vlieg Jigmil is used to locate and bore the cylinder, gear-driven ink rollers, and gear bearing holes in ATF Chief frames.

Once the adjustments have been set, the Jigmil automatically positions every subsequent frame by moving its machine table or spindle head until the desired center is located to within 3-5/10,000ths of an inch. Then this 12-ton precision borer is micrometer-set so accurately that it will remove a pencil mark from a boring without cutting the metal.

Bearing holes not so accurately located on the press frame could easily throw cylinders out of parallel, cause excessive wear to precision gears, make smooth high-speed operation impossible and take years off the productive life of a press.

That's what we mean when we talk about the precision engineering that goes into an ATF Chief. You won't find more accurate borings in any press regardless of price. It's like getting Cadillac construction for Chevrolet prices.

It will pay you well, next time you're in the market for a small offset press, to ask for the full story on the precision-engineered ATF Chief. Write AMERICAN TYPE FOUNDERS, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, New Jersey.

Better, More Profitable Printing from the Widest Line of Processes

GRAVURE . . . LETTERPRESS . . . OFFSET

Equipment & Supplies

(Continued from Page 18)

graphic Technical Foundation, Inc. According to LTF, the gauge was especially designed and calibrated to tell how thick the blanket will be when it is stretched upon the cylinder of an offset press. It was first described in an article appearing in the June 1951 issue of *Printing Equipment Engineer*. In requesting this bulletin, please refer to PEE No. 58 in your letter.

Improved Table-Top Collator

An improved table-top collator designed with tilted bins, Ejectomatic Feed and ball bearing mechanism, has been announced by Thomas Collators, Inc.

Sheets to be collated are placed in the bins and by means of a hand operated lever, rubber-tipped fingers push the top sheets of each pile out into the operator's hands. The collated set of sheets is jogged by hand and then dropped into a gathering tray directly below the unit. The hand lever may be located on either the right or left side of the unit. The collator is available in both 5 bin and 8 bin capacities, and occupies 16 in. by 27 in. of table space. Further details may be obtained by referring to PEE No. 46 in your request.

Newspaper Supply Catalog

Eastern Newspaper Supply, Inc.'s, latest catalog of equipment and supplies for composing room, photoengraving, stereotype and pressroom departments is now available. It is comprised of 56 pages. Included are numerous illustrations of the listed items as well as descriptions and specifications. In writing for a copy of the catalog, please mention PEE No. 54 in your letter.

Web Offset Press Bulletins

Three illustrated bulletins on ATF-Webendorfer web-fed offset presses have been issued by American Type Founders. One, titled *Heading the Parade*, features descriptions of business form presses and auxiliary ATF machines. In addition to the two general purpose form presses, which can be adapted for either rubber plate or offset printing, the 16 page bulle-

(Continued on Page 31)

"it's the 'FOLDINGEST' COVER PAPER I'VE EVER SEEN"

"Yessir, when properly scored, Buckeye Cover is practically crack-proof and won't fuzz on the folds. That's one reason why we always specify it," says this agency production manager,* "and there are others. In our shop, Buckeye Cover is the old reliable, and always has been, for strength and durability, for looks and for feel, for dependable printability."

If you want your catalogue, or booklet, or house organ to be read from cover to cover—be sure it *has* a cover. To make assurance doubly sure, be sure to give it a BUCKEYE COVER. Complete sample book on request.

THE BECKETT PAPER COMPANY

MAKERS OF GOOD PAPER IN HAMILTON, OHIO, SINCE 1848

BUCKEYE - BECKETT PAPERS

*Name on request.

Wiretyer - Streamlines MAILROOM PRODUCTION at far less cost!

Fully Automatic

Wiretyer at work in various plants where speed and easy handling are essentials.

Wiretyer installations serving these well-known publishers:

Akron Beacon-Journal
Danner Press
Florida Times-Union
Miami Herald
Milwaukee Journal
Newark Evening News
New York Herald-Tribune

FEW modern mechanical miracles are as impressive as ponderous, high-speed newspaper presses that turn out many thousands of complete newspapers in a matter of minutes.

Up to now, the problem of bundling this prodigious output and getting it promptly to waiting trucks has been a major bottleneck in newspaper mailrooms.

Now, Wiretyer equipment is serving newspapers across the country with unprecedented speed and economy of operation that amortizes its cost in just a few years.

What this remarkable new development is accomplishing for newspapers and publications generally it can do with equal facility and flexibility in any industry having occasion to produce strong, pilfer-proof bundles of soft or hard goods, with speed and economy.

Write today for your copy of Wiretyer Bulletin 101. Until you examine the possibilities of this equipment, in its relationship to your business, you cannot possibly appreciate the remarkable advantages of this revolutionary development.

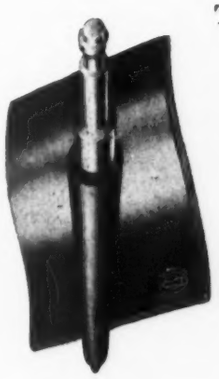
WIRETYER CORPORATION

6-53-5

230 WARBURTON AVENUE, HAWTHORNE, NEW JERSEY

MERCURY PRODUCTS

make tough jobs easy



The most complicated makeready, the heaviest forms, and trickiest vignettes all become far simpler to handle—when you have the *right* rollers and blankets for the job. And "right" means "MERCURY" every time! Tame your tough assignments with MERCURY Rollers and Blankets.

RAPID ROLLER CO.

FEDERAL AT 26TH ST. • CHICAGO 16, ILLINOIS

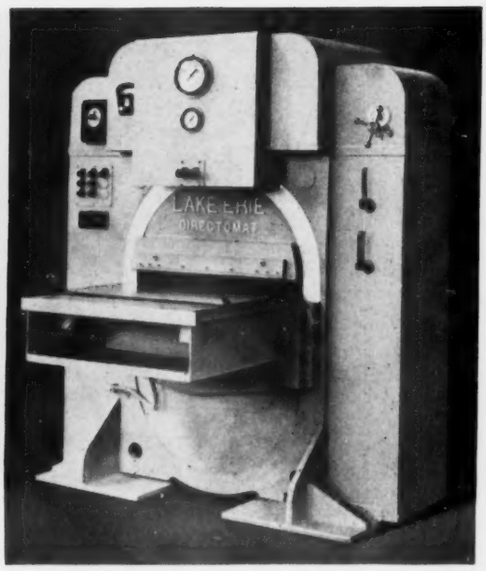
Talk about satisfaction...

RAPID
ELECTROTYPE COMPANY
ORDERS 6 MORE
LAKE ERIE MOLDING PRESSES

- This will make a total of 36 Lake Erie ACRAPLATES and DIRECTOMATS serving Rapid's 5 plants

- Rapid has been buying Lake Erie presses continuously for 18 years

ACRAPLATE—For rubber and plastic plate molding.



DIRECTOMAT—For direct pressure mat molding.

ACRAPLATES AND DIRECTOMATS IN RAPID ELECTROTYPE PLANTS

San Francisco	4*
Detroit	7
New York City	11*
Cincinnati	8
Philadelphia	6

*6 on order

Remember Rapid's satisfaction when you buy molding presses. Remember how much experience Rapid has had with Lake Erie equipment...18 years of it...with 36 Lake Erie presses installed or on order! You *know* equipment *must* be outstanding to win and maintain such high confidence over such a long period of time. *You know* it's the kind of equipment *you want* in your plant. Remember ACRAPLATE and DIRECTOMAT.

LAKE ERIE HYDRAULIC PRESSES

LAKE ERIE®
ACRAPLATE®
DIRECTOMAT®

Write for descriptive literature

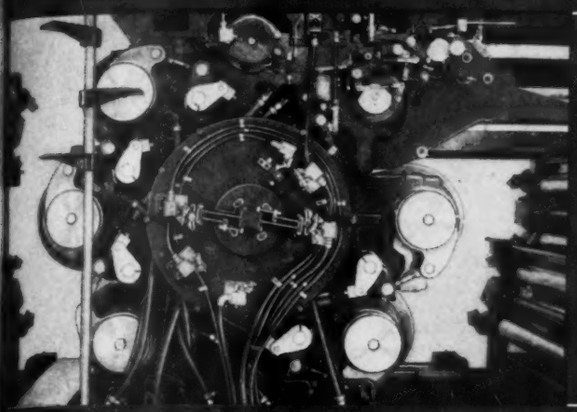
LAKE ERIE ENGINEERING CORP.

General Offices and Plant
568 Woodward Avenue, Buffalo 17, New York
District Offices in NEW YORK • CHICAGO • DETROIT • PITTSBURGH
Representatives in other U.S. Cities and Foreign Countries

Leading manufacturer of hydraulic presses—3,500 designs from 5 to 22,000 tons capacity—rubber and plastic printing plate molding... newspaper mat molding...plastics molding...laminating...die sinking metal working...forging...metal extrusion...wallboard and plywood rubber vulcanizing...die casting and special purpose.

COTTRELL 5

assures...

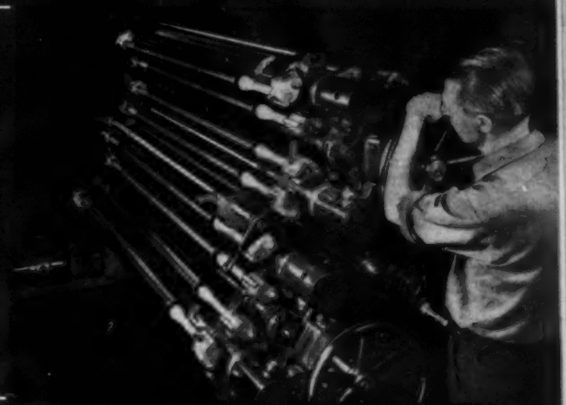


ABSOLUTE SHEET CONTROL

A vital factor in multi-color close register printing — *sheet control* is a reality with the Cottrell Common Impression Cylinder High-speed rotary presses . . . one to five colors without sheet transfer.

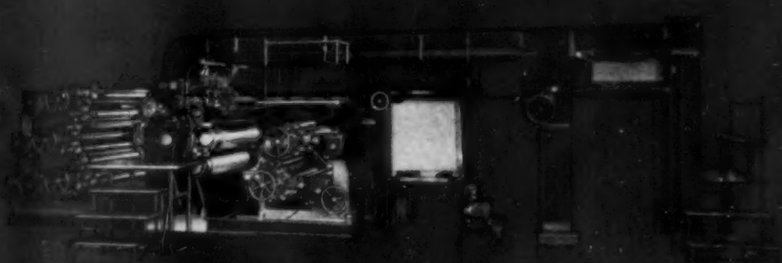
FINEST INK DISTRIBUTION

Large capacity ink fountains and exceptional control permit thorough, even inking. Two steel feed rolls, three vibrating ink cylinders, four form rolls, six distributor rolls and one ductor complete the inking mechanism.



BEST HOOK SYSTEM

The use of Claybourn patented register plate hooks with spirally grooved plate cylinders reduce lock up time to a bare minimum.



C. B. COTTRELL & SONS COMPANY

Equipment & Supplies

(Continued from Page 25)

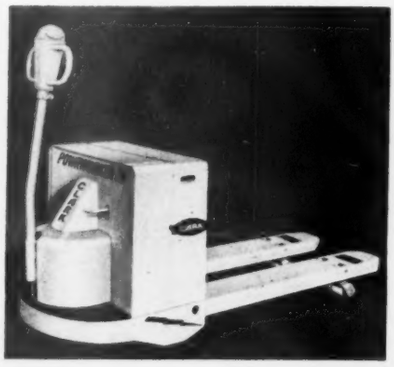
tin includes a number of special form presses for printing blank books, checks and other business forms. Also shown are rewinders, flat sheet delivery, former folder, collators and carbon processor.

Publication presses are the subject of another bulletin. Among the presses discussed are a two-unit perfecting press, a one-unit perfecting magazine press; a four-unit perfecting newspaper press; and a large multicolor perfecting press consisting of four units, a special folder for digest-size publications and a chain-gripper type flat sheet delivery.

The third ATF-Webendorfer bulletin concerns web-fed color speciality presses. These presses are designed for printing such items: playing cards, checks, table place mats and other classes of work. They utilize conventional wet offset plates, and if printing is done by dry offset, rubber relief plates are used. Please mention PEE No. 41 if copies of these bulletins are desired.

Powered Hand Trucks

Clark Equipment Co. has announced its Powrworker 26 line of powered hand trucks with lenghts of 26 in. longer than the length of the load being carried. The line includes low lift pallet and platform trucks in both 4000 and 6000 lbs. capacities; telescopic tilting fork trucks in base capacities of 1500, 2000, 2500 and 3000 lbs. all at 24 in. center line or 48 in. load length; as well as walk-it-or-ride tractors



designed for either slow or high speeds. All of these trucks can be ridden by the operator.

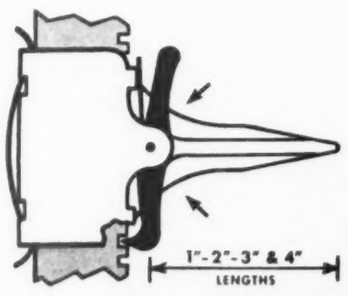
A low center of gravity for load stability has been obtained by placing the battery in an underslung position. Trucks are equipped with 6 in. wide, 10½ in. diam. drive wheel. The brake, which operates on the motor shaft, transmits its action through a gear ratio of 22 to 1. The brake is spring applied and actuates a deadman switch that automatically breaks the power circuit when the steering handle is in a vertical or horizontal position. The steering handle automatically returns to the vertical position when it is released by the operator.

The control box and tubular bayonet type control handle provide two speeds forward and reverse through notched positions. Speed and direction are selected by a spring loaded fingertip walking beam or butterfly lever built into the control box.

Driving and hoisting motors are series wound, high torque type, ball-bearing equipped and horizontally mounted. The gear train is mounted on ball and roller bearings and operates in an oil bath in a totally enclosed housing. Please mention PEE No. 47 if further details are desired.

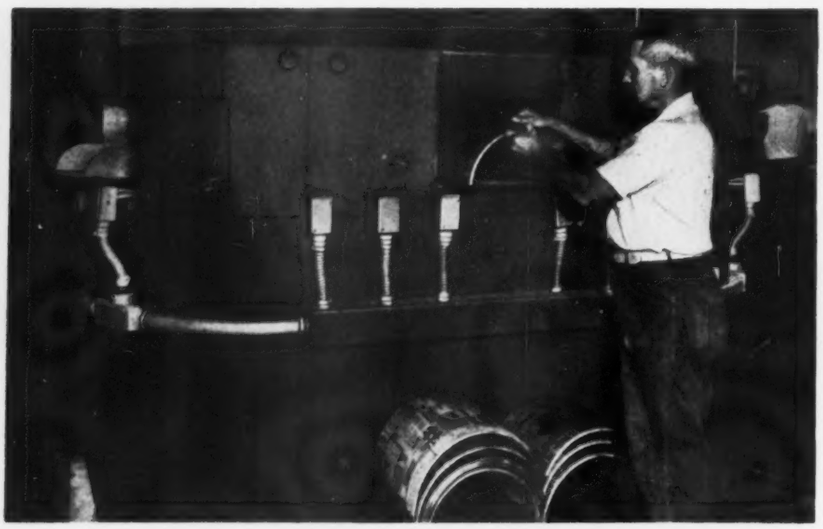
Better Gripper Fingers

An improved platen gripper finger has been introduced by Casper Gripper Co. Featured are greater clearance for new



high furniture and quoins and added metal areas (indicated by arrows) to increase strength and life of fingers, according to the sponsor. An enlarged reinforcing ridge permits trigger pivot pin head to be countersunk for clearance. Cutaway view shows how trigger point locks into

(Continued on Page 32)



CAPABLE OF PRODUCING METAL FOR 129 PLATES PER HOUR, the Patriot's new stereotype melting pot is equipped with 12 cast-in G-E Calrod immersion heaters.

HARRISBURG PATRIOT REPORTS:

Experience Proves Calrod* Heaters Best for Stereotype Melting

Twenty years of continuous service in the now outgrown Patriot plant proved Calrod heaters are dependable, easy to maintain, and provide cleaner, cooler working conditions. This convincing performance led to a similar installation in the new plant.

Today, more and more of the nation's daily newspapers are converting to G-E Calrod heaters for dependable, low-cost metal melting. Continuous operation is assured because individual heaters can be easily replaced without interrupting the melting process. Cooler, cleaner working conditions and minimum heat losses are additional advantages of applying electric heat directly to the metal.

You can convert to efficient Calrod stereotype melting over a weekend—without costly production delays. For the complete story, contact your nearest G-E Sales Office or write for Bulletin GEA-5453 to Sect. 720-116, General Electric Co., Schenectady 5, N. Y.

*Reg. Trade-mark of General Electric Company.

GENERAL ELECTRIC

We Couldn't Have Said It Better Ourselves!

HERE'S WHAT A FEW PRINTERS SAY ABOUT

Strong GRAFARC LAMPS

"HAS DOUBLED OUR CAPACITY IN MAKING PLATES."
—AN INDIANAPOLIS LITHOGRAPHER

"Has enabled us to reduce our exposures of deep-etch plates by two minutes and thirty seconds, and on flat plates, one minute, which certainly is A GREAT SAVING TO US. The features which appeal to us most are: (1) The easy handling and operation. (2) The clarity and steady burning of carbons, and, (3) the improved method of carbon holders."
A WINNIPEG, CANADA PRINTER AND LITHOGRAPHER.

"We would hate to return to the older type."
—A BINGHAMTON, N.Y. LITHOGRAPHER.

"The COVERAGE IS VERY GOOD and there is NO FLUCTUATION IN LIGHTING."
—A ST. LOUIS PRINTER.

"ONE OF OUR PROUDEST POSSESSIONS."
—A NEW YORK CITY PRINTER.

"WE WONDER HOW WE GOT ALONG WITHOUT IT for so long."
—A SALT LAKE CITY LITHOGRAPHER.

"We have been particularly well pleased in its uniform coverage of large areas, and OUR STANDARD EXPOSURE TIME HAS BEEN CUT IN HALF ON NEARLY ALL KINDS OF WORK."
—A LOUISVILLE PRINTER.

For control that improves quality, intensity that speeds production, efficiency that saves you money, install Strong Grafarc Fully Automatic High-Intensity Arc Lamps.

Models for all photo-mechanical reproduction processes.

Use coupon now to obtain prices and complete literature.

THE STRONG ELECTRIC CORPORATION
307 City Park Avenue • Toledo 2, Ohio

Please send free literature and prices on the complete line of Strong Grafarc Lamps.

NAME _____

FIRM _____

STREET _____

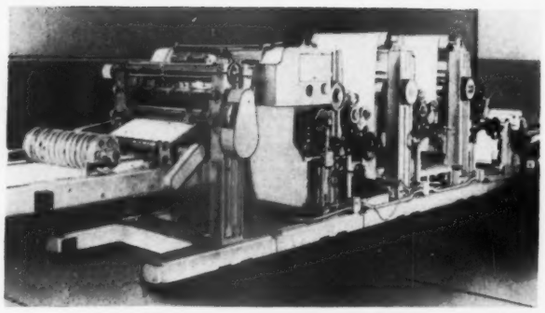
CITY & STATE _____

NAME OF SUPPLIER _____

Equipment & Supplies

(Continued from Page 30)

teeth in arm for use on all kinds of job press work. Casper Grippers are made in sizes to fit all automatic or hand feed platen presses. Illustrated folder available. For further details, please mention PEE No. 52 in your request.



Manhasset Machine Co.'s Dual Process Printer, a rotary web printing press that is interchangeable for printing by either the gravure or flexographic processes.

Dual Process Press

A rotary web printing press that is interchangeable for printing by the gravure and flexographic processes has been reported by Manhasset Machine Co. Called the Dual Process Printer, it is designed for printing, tinting, lacquering and coating operations on most paper and film including Cellophane, foil, kraft, glassine and board.

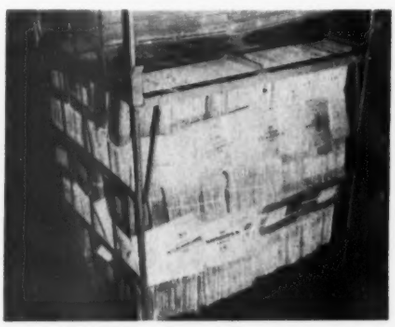
The machine is furnished with standard unwind and rewind equipment including constant tension mechanism. It may also be equipped for slitting, sheeting, die-cutting, punching, perforating and other fabricating operations.

Depending on the nature of the job, states Manhasset, the printer may use both processes in combination or either of the two processes separately. The gravure process is used for fine screen halftone reproduction in single or multicolor. The flexographic process is utilized for line work and solids.

The press is an in-line unit consisting of a series of self-contained sections each with its own high-speed drier. Each section is also equipped with non-splash fountains with ink pump connections and 360 deg. radial and lateral running register controls. Additional units may be added when desired. Printing widths of the various models range from 18 in. to 60 in. If further details are desired, please mention PEE No. 65 in your request.

Steel Racking Stack

The all-steel stacking rack made by the Leebaw Mfg. Co. is designed for storage of problem items. The rack is engineered



to accommodate specified pallet sizes. Typical loads may include knocked-down cartons, cardboard tubes, and in general, all types of unstable or semi-stable loads that would tend to tumble or crush themselves if stacked without racks. It is built with flanged legs so that each unit will have complete rigidity when resting on another below. Use of these racks permits utilization of all storage space from floor to ceiling. Capacities of individual units vary according to size. The base unit illustrated accommodates 1500 lbs. With steel side bars spaced at intervals, contents of each rack are held in position, yet are always visible for identification. Further details may be obtained by mentioning PEE No. 61 in your request.

(*Continued on Page 66*)

Speaking of

Duraplate
THE NEW PHOTOENGRAVING ZINC

WE LIKED IT . . .

We nursed it through development, tested it, improved it, finally introduced it. But you never know for sure what may happen. That's why we are so pleased to find out

YOU LIKED IT . . .

So

THANKS

for the acceptance you have given DURAPLATE. Your response has been wonderful. We will do our level best to produce DURAPLATE in quantity —always of the same high quality.

Imperial
TYPE METAL COMPANY
SERVING THE GRAPHIC ARTS *Exclusively*
CHICAGO 50 • NEW YORK 7 • PHILADELPHIA 34
IN CANADA: LATIMER, LIMITED, TORONTO 2-B

P.S.—Imperial *Regular Zinc* and Imperial Duraplate are *both* always available. No premium price for Duraplate. Order either or both to meet your requirements.

Mac- This is the best saw
I have seen - Let's go after
the old man to order some for
here - We need a Morrison
Slug Stripper, too.
- Al.
MORRISON SLUG STRIPPER

The New York Times has 17 Morrison Saw Trimmers and a Morrison Slug Stripper. This picture of part of New York Times' ad room shows practical arrangement of saws and make-up tables.

Morrison Saw Trimmers in your composing room, with a Morrison Slug Stripper, cut your ad composition time to a minimum.

The MORRISON SLUG STRIPPER "proves itself the first day" . . . Speeds up stripping the face of any slug or type character to exacting thickness for quick corrections in zincs, electros or shell stereotypes. Saves mortising of the base. Without special adjustments, the clamp holds any slug from one point to 72 points, or from a single character to 30 picas in length. A great time-saver in any composing room.

Other Morrison Equipment Includes: Saw Trimmers, Plate Bevelers, Router and Type-high Planer, Strip Material Cabinets, Waste Receptacles, Universal Saw Blades, Router Bits, and Jigsaw Blades.

Symbol of Operating Economy

MC

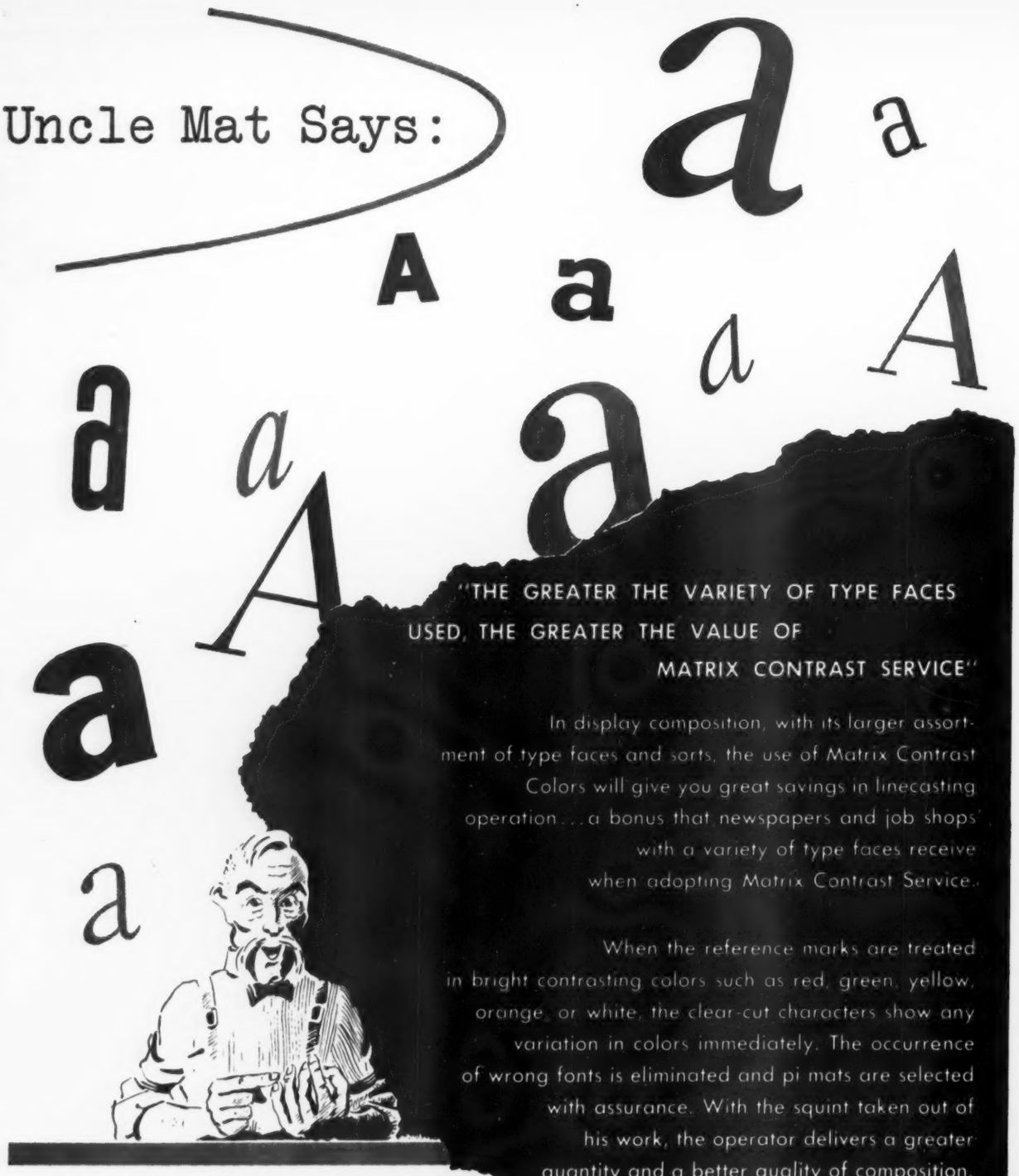
THE MORRISON COMPANY MILWAUKEE WIS.

THE *Morrison* COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. MELVINA STREET • MILWAUKEE 12, WIS.

Uncle Mat Says:



"THE GREATER THE VARIETY OF TYPE FACES USED, THE GREATER THE VALUE OF MATRIX CONTRAST SERVICE"

In display composition, with its larger assortment of type faces and sorts, the use of Matrix Contrast Colors will give you great savings in linecasting operation . . . a bonus that newspapers and job shops with a variety of type faces receive when adopting Matrix Contrast Service.

When the reference marks are treated in bright contrasting colors such as red, green, yellow, orange, or white, the clear-cut characters show any variation in colors immediately. The occurrence of wrong fonts is eliminated and pi mats are selected with assurance. With the squint taken out of his work, the operator delivers a greater quantity and a better quality of composition.

Take it from your old Uncle Mat...

not one but five persons are pleased when Matrix Contrast Service is installed . . . the operator, the machinist, the employer, the reader, and the advertiser.

Copyright 1953, Matrix Contrast Corporation

MATRIX CONTRAST SERVICE *MATRIX CONTRAST CORPORATION*

154 West 14th Street, New York 11, N. Y.
326 W. Madison Street, Chicago 6, Ill.
1105 Trenton Street, Los Angeles 15, Calif.

European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E.C.1.

Injection Molding of Type Slugs with Thermoplastics—Is It Here?

FOR many years grapevine announcements regarding the use of plastics for molding type slugs on Intertypes and Linotypes have been circulated more or less in a fugitive manner throughout the printing industry. From time to time development engineers have sought to replace standard type metal alloys with one kind or another of substitutes. There was the Kadow method of "blowing" a slug from glass. This method didn't get too far beyond the development stage. Fragility of the material itself as compared to type metal was the principal cause of arrested development. Some speculation was created a number of years ago when it was proposed to "cast" line slugs from plastic. If memory serves aright, the cause of arrested development in this instance was in the device itself in that during the injecting movement the force of the injection ram stroke came against the vise locking screws of a standard line-composing machine which were not designed for such strain.

Plastics are used in industry generally for making many kinds of articles of intricate design. In the printing industry inventors have speculated for a long time upon the possibility of converting the standard line-composing machine metal pot to injection casting of plastic type slugs.

Because of the relatively light weight of plastics (one-eighth the weight of type metal), the anticipated printing durability of plastic type, and the compatibility of plastic printing surfaces with printing ink, shooting for the goal has seemed to be a worthwhile endeavor.

Development Engineer Fred Jernt, of Jernt Engineering, Inc., Chicago, has designed what might be called the prototype model of a plastic injecting unit for application to Intertype and Linotype machines. The prototype model has been applied to such a machine in Chicago and slugs have been produced on it in quantity.

Hydraulic Unit Replaces Hot Metal Crucible

Jernt explained that the only change in the present hot metal machine consists of removing the pot crucible and packing from the jacket and substituting a hydraulic injection unit in its place. The pot pump lever, its spring and plunger, have also been removed. The molds, justification and vise apparatus as now used on the machine are retained, including the back and side slug trimming knives.

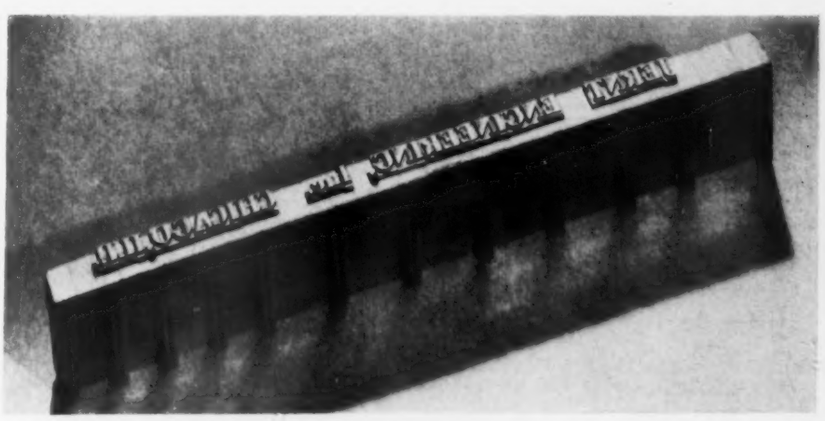
In converting a line-composing machine to plastic slug production the hydraulic injection unit, as stated above, is mounted within the pot jacket.

Injection Unit Self-Contained

It is a self-contained unit and the injection strain of the ram which forces the plastic into the mold is taken by and is self-contained within the hydraulic unit. Otherwise, the modified metal pot still performs its normal movements before and after line justification and after the injection of plastic into the mold, just the same as if it were casting a slug from standard type metal. The "casting" or injection movement of the ram in the hydraulic unit in forcing the liquid plastic into the mold is governed by a micro-switch in place of the pot pump cam.

Principle of Operation

The cross section diagram shows the principle of operation of the hydraulic injection unit. Attached to the unit is a hopper to hold the plastic pellets. The hopper is connected to the vertical cylindrical feeding tube (corresponding to the well in the hot-metal pot crucible



This halftone was printed from a photoengraving made from a photograph of a plastic slug cast in a 14 pt. recessed 20 pica linecomposing machine mold. The letter characters on the slug were cast from standard linecomposing machine matrices and the line was justified in the usual way with spacebands. The plastic in this instance is compounded with powdered aluminum. In fact, the slug is of a dull silver appearance and is very light in weight.

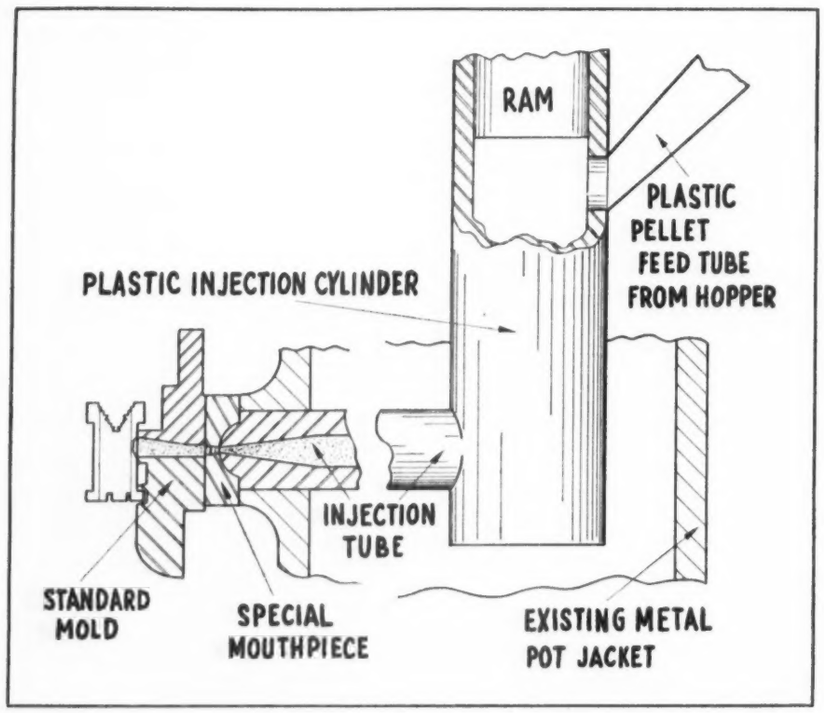
well). The ejection cylinder extends horizontally from the feeding tube to the pot mouthpiece. The mouthpiece itself is 1 in. thick from front to back. Midway of the mouthpiece there is a slot approx. ⅜ in. wide by ⅛ in. high, flaring from back to front. It is through this "port of entry" or mouthpiece jet that the liquid thermoplastic compound is injected into the mold. In other words, the slot just mentioned is the only outlet for the liquid plastic through the mouthpiece into the mold. The ejection pressure caused by downward movement of the ram is of the order of 400 lbs. to 500 lbs.

Jernt explained that in the case of a 30 pica machine which is used intermittently to set 11.6 wide slugs for body matter composition and then is changed from time to time for full 30 pica composition, the mouthpiece jet or "port of entry" (gate valve) would be located so as to come within the left end of the 11.6 pica slug mold orifice. The injecting temperature of the plastic is approx. 340 deg. just behind the mouthpiece. Further back in the vertical section of the well chamber the temperature is maintained at 260 deg. F.

Plastic Shrinkage

Construction of the pot mouthpiece is such that the jets and cross vents usually associated with the hot metal mouthpiece do not exist. Now, it should be explained that the shrinkage of type metal from molten to solidified state is approx. 0.012 per in. The liquefied plastic when heated to molding temperature is water-like in consistency. Solidification of the liquid plastic in the mold cell is said to be extremely rapid.

Shrinkage of the plastic compound used in casting type high (0.918 in.) slugs is approx. 0.010 in. Since there are no jets or vent sprues to be trimmed from the base of the slug, Jernt has provided grooves extending the full width of the mouthpiece which indentations cause a rib or rail to be cast along the top and bottom edges of the slug. Thus the shrinkage factor is taken care of in the design of the mouthpiece itself with respect to trimming the slug to 0.918 in. high after solidification. It is these rails that are shaved by the back trimming knife to trim the slug to type high, including the large center jet formed by the slot in the mouthpiece through which the plastic enters the mold cell. The side trimming knives perform their usual function when the slug is ejected from the mold. Air within the mold is forced out between matrices and mold or from slight openings between base of mold and mouthpiece, as in foundry type-casting.



Schematic diagram showing design of Jernt Hydraulic Unit for injection molding of line-composing machine slugs. The unit is self-contained and is mounted in the standard metal pot jacket after removal of crucible and packing. This unit is self-contained, the 400-500 lb. injection strain of the hydraulic ram being taken within the unit itself. The hot metal pot pump plunger lever, the plunger and the spring are removed from the machine when the plastic injection unit is installed. Plastic in pellet form is fed by gravity through the tube opening below the ram. Electric strip heater units with thermostatic control maintain proper plastic working temperatures. Temperature of the plastic back of the mouthpiece is maintained at 340 deg. In the vertical section of the feeding cylinder the plastic is maintained at 260 deg. F. temperature. The ram makes its injection stroke at the proper instant at command of a micro-switch.

Fred Jernt, Chicago Development Engineer, and head of Jernt Engineering, Inc. Inventor is designing a plastic injection unit for the Ludlow Typograph. Prototype model is for application to Intertypes and Linotypes.

High Speed Operation

It is not necessary, states the developer, to cool the mold either with air or water. When asked about ability of the Mohr Saw to trim plastic slugs, Jernt said the trimming operation would be performed similarly to that of metal slugs.

It is also stated that the plastic injection of slugs may be done on high speed line-composing machines operating at 12 lines per min. According to plastics engineers, molds, spacebands and/or matrices are not subject to oxide coating of any kind through repeated and continuous use.

In answer to another question, the developer stated that intermittent use of different and extreme type sizes during a normal day's work does not complicate machine manipulation by the operator in any way.

Plastic Used Repeatedly

Jernt stated that the thermoplastic material may be used repeatedly. To prepare the used slugs, they are first run through a grinder which reduces them to small-chunk form. These pellets are then fed into the hopper of the hydraulic injection unit.

While the material is thermoplastic, it does not begin softening under approx. 210 deg. F., states the developer.

Photo Offset Plate Contest

First prize of a 1954 Mercury Sedan will be awarded in a national Photo Offset Plate contest sponsored by Minnesota Mining and Mfg. Co. The contest will run January 15 through April 15. Eligible for prizes are all personnel employed in or associated with any type of offset duplicating department in the United States and Canada. In addition to the 1954 Mercury, there is a $500 second prize, and 10 third prizes of $100 each. Entrants must complete the following statement in 25 words or less: "I switched to 3M Photo Offset Plates because. . . ." Entry blanks may be obtained from 3M dealers or direct from 3M Printing Products Div., St. Paul 6, Minn.

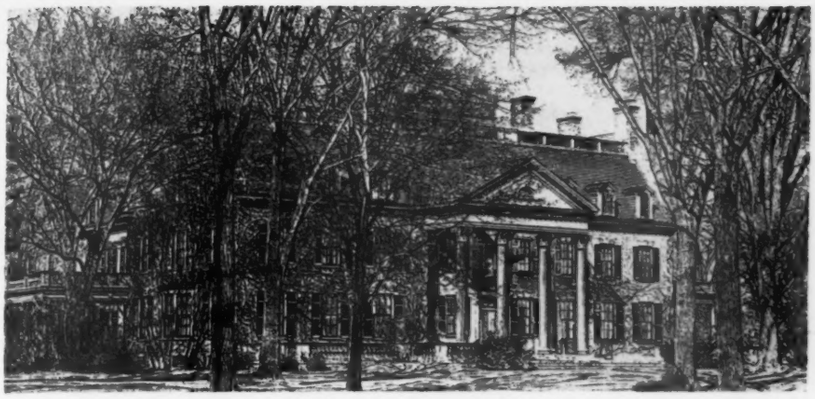


Fig. 2—A line effect obtained from a continuous tone image by means of the Kodak Tone-Line Process.

Obtaining Line Effects from Photographs

By GEORGE JOS. LENZER

TWO techniques may be employed for converting a continuous tone image into a line drawing by photographic means. One such process has long been known to and used by offset-lithographers and by many photoengravers. Wherever it is used, knowledge of the method has been imparted only to those employees assigned to perform the operation. In plant terminology these employees are usually known as darkroom workers or contact men. They are specifically concerned with the production of photographic contacts for any masking process.

The second technique for obtaining line effects, which is essentially the same as the first, is known as the Kodak Tone-Line Process. This method is explained in a recently issued booklet by the Eastman Kodak Co. called *Line Effects from Photographs by the Kodak Tone-Line Process*. The conversions—which result in an effect similar to that of a pen-and-ink drawing—may be produced from any sharply detailed good photographic film negative. No additional art work is necessary to fit most such pictures for reproduction, but in cases where important characteristics or details must be clearly reproduced, these may be enhanced or added by the artist to a tone-line print.

When used as a base for further art work, the Kodak process results in the production of pen-and-ink type pictures in much less time than is normally required to make such drawings, states the Eastman company. It also makes possible the photomechanical reproduction of illustrations for many general industrial and other purposes without the use of a halftone screen.

The principle of these processes is known as utilization of light spread. Following the first technique, light spread is accomplished by making an exposure (emulsion-to-emulsion), of an original continuous tone negative, thus producing a contact continuous tone positive image of equal density or contrast.

Being of equal contrast and density, the superimposed negative and positive will cancel out corresponding densities and contrasts. This renders the superimposed elements opaque to the action of light when superimposed emulsion-to-emulsion.

To obtain the line drawing effect, activating light must be capable of passing through the superimposed elements. Since this would be impossible by masking emulsion to emulsion, the two elements are superimposed back-to-back, thus allowing two thicknesses of clear film to separate the two emulsions.

The next step is to make the line positive image. This may be a contact exposure to photoprint paper (AZO), or to film as indicated in Fig. 1. If a film line positive is made, this means that a contact negative will have to be made from the positive if positive photoprints are desired.

By setting the light source off center from 30 deg. to 45 deg. and at the correct light distance from the contact assembly, the angled light beam will undercut the masking image. By diffraction and refraction effected by the film distance between the superimposed negative and positive mask, the activating light rays will be spread and will pass through the contacting original negative.

If a turntable is used, the light must be permanently fixed, but if exposure is made in a vacuum frame, the light must be capable of rotating at the prescribed or desired angle distance to effect the correct exposure. The principle of light spread finds its greatest application in offset or photoengraving whenever it is desired to effect an increase in dot size of a halftone image, either by producing a negative or positive or when exposing a printing plate sensitizer or coating.

The Kodak Tone-Line Process combines a negative with a positive of nearly equal contrast, so that the positive in effect acts as a mask for the negative. The negative and the positive are taped together in register and placed in contact with a sheet of Kodalith Film. The Kodalith Film is then exposed either by rapidly spinning the printing frame underneath a fixed light, or by rotating a moveable light above a stationary frame. Either method allows some light to work its way around the edges of the mask and negative, and produce a line image on the film.

Kodak Tone-Line Process reproductions can be made from either an original negative or a photographic print. Among the samples of the technique illustrated in the booklet are a series of reproductions which show how a tone-line reproduction with added art work can be produced,

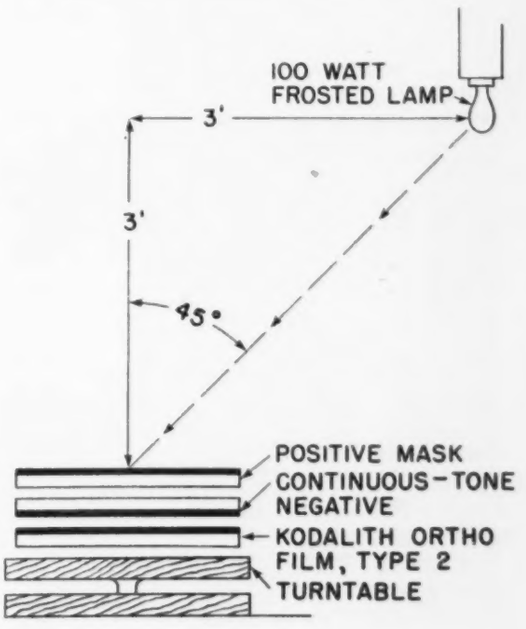


Fig. 1—Method of exposing film to produce line effects with the Kodak Tone-Line Process utilizing the turntable method of exposure.

according to Eastman Kodak, in one-third to one-half the time necessary for complete hand drawings or tracings of the same subject.

The booklet also includes an outline of steps in the process, data on the production of the continuous tone negative and the positive mask, lighting equipment registering equipment and methods, procedure, production of line positives, the rotation method of exposure, the vacuum-frame method of exposure and procedure for the vacuum frame method. Copies may be obtained without charge by writing Sales Service Div., Eastman Kodak Co., Rochester 4, N. Y.

A disadvantage in the Tone-Line process is that it tends to lose highlight detail. This is evident in Fig. 2 at the right side end of the roof and chimneys. A method of overcoming this is by localized treatment allowing for the action of light spread in certain areas only, while obtaining direct contact at others.

Referring again to the time saving element, much depends upon the subject being reproduced. The real question is how much art work must be done after obtaining a photoprint. We have seen many examples where easy looking jobs required considerable time to obtain the results desired. One such was the accurate reproduction of some small, tiny nut, bolt or screw, guide pins or springs. Simple???? Yes, like having a bull by the tail.

Great Lakes Conference

Considers technical problems created by increased production speeds and demand for better quality of printing.

By STAFF WRITERS

APPROX. 710 people attended the Jan. 10 to 12 meeting of the Great Lakes Mechanical Conference, Indianapolis, Ind., at Hotel Claypool. This is the greatest attendance reported by Sec.-Treas. Don Clark (Stereotype Supt., Grand Rapids (Mich.) *Press*, since establishment of the conference in 1945. There were 24 exhibiting companies who showed their latest developments in equipment and supplies. During the past year, like his predecessors, Horace Parker has functioned as a gracious and hard working president of a lively conference group. The conference program itself under direction of Lee Doll, recently Production Mgr. of Indianapolis Newspapers, and his committee was of great value to attending executives. Between talking to the exhibiting companies and discussions during conference sessions, many executives expressed themselves as having "learned a lot" about newspaper production techniques. Of major interest were the Machinists' session, Director C. M. Flint's report on gradually developing work by the ANPA Research Dept., and the Stereotype session. All of the other sessions were equally as important, but it seemed that high cost of production together with demands by management for faster produced and better printed papers in recent times caused quickened eagerness to get acquainted with methods to satisfy those demands.

Non-metropolitan Techniques

THE Great Lakes Mechanical Conference was opened Jan. 10 at Hotel Claypool, Indianapolis, Ind., with remarks by Pres. Horace H. Parker, Press-Stereo Foreman., Richmond (Ind.) *Palladium-Item*. Addresses of welcome were given by Crawford Parker, Secretary of the State of Indiana, and also by Walter Leckrone, Editor, Indianapolis *Times*, on behalf of the Indianapolis Publishers Assoc.

A session devoted to problems encountered by non-metropolitan newspapers was directed under the chairmanship of Kenneth L. Chatters, Superintendent, University of Michigan *Daily*, Ann Arbor, Mich. Co-chairman was J. Les Duermit, Superintendent, Middletown (O.) *News-Journal*. The first paper was delivered by Chatters on *Gadgets and Their Aid to Production*. With the aid of slides he showed a number of devices developed with the intention of saving time and eliminating minor irritations which hurt employee morale.

New Great Lakes Mechanical Conference President Frank Dassori (left), Pressroom Supt., Detroit *Times*, discusses matters with Immediate Past President Horace H. Parker, Press-Stereo Supt., Richmond (Ind.) *Palladium-Item*.

Composing Room Aids

Among these was the signal system for different departments at the *Michigan Daily*, gooseneck light for use on the rear of linecasting machines and bronze numbers used for numbering the machines. An alarm bell automatically rings when the supply of metal in the melting pots becomes low enough for another metal pig to be hung on the chain.

Various helps for the ad compositor were a copyholder, ¼ in. double-coated tape, special rack for 6 and 12 pt. spaces, and racks made especially for holding 10, 11 and 22½ pica leads and slugs. Diffused fluorescent lighting and acoustical paneling were also indicated as production aids.

Chatters pointed out that some of the floor trucks in the plant have been equipped with rabbeted front and back edges for conveniently sliding ads on and off the working surface. Grease guns operated on the compressed air line are interchangeable for using different kinds of grease.

The ink pump which pumps the ink into the press fountains is designed with

Attending Great Lakes Mechanical meeting were, left to right, George Fuller, Stereotype Supt., Cleveland *Press* and Lloyd Wright, Stereotype Supt., Fort Wayne (Ind.) Newspapers, Inc.

a by-pass arrangement so that when all valves are closed the ink is drawn from the bottom of the tank and pumped into the top.

A rolling maintenance truck is equipped with two tool drawers, shelf for cloth wipers and pot well cleaning tools. An Ewald plunger cleaner and small vise are mounted on the working surface. An IBM time clock is used for stamping all copy as it is received in the composing room. It helps considerably in tracing late copy, he said.

Chatters' plant also issues each new employee a copy of a booklet entitled *You and Your Job*. It is intended to acquaint workers with the personnel policies of the University.

Fire Protection

Mr. Parker followed next with a paper on the subject *Is Fire Protection, Other Than Automatic, Really Protection?* He explained that at the *Palladium-Item* automatic fire protection equipment includes complete dry valve sprinkler systems in both the plant and warehouse, and an automatic CO_2 system protecting the press pit and electric generator room.

He suggested a number of steps a small newspaper might take in providing fire protection. Protect as many different parts of the building with fire walls. Abolish smoking near flammable liquids and around loose paper. Always keep flammable liquids, oily waste and rags in approved safety cans.

Proper maintenance of electrical equipment and frequent checks for loose wires were cited as other means of fire protection. Rubber covered extension cords become dry and brittle and should be replaced. All equipment operated by electrical means should be inspected periodically.

He continued: "You can't have too many fire extinguishers of different types. When used on a fire in a newspaper plant, CO_2 or dry chemical will cause less damage. These hand extinguishers should be located in strategic places, usually near doorways where they are easy to get at and handle. A portable cart with heavier extinguishing equipment is also a good idea."

Parker advocated proper training of employees in the operation of extinguishing equipment. A fire school was also named as a protective measure which might be undertaken by any size newspaper.

Presented next on the program was Pres. Ira C. Odle, Mid-West Fire & Safety Equipment Co. Odle revealed that in many cases, clear water extinguishers are replacing the soda acid type. These, he explained, are operated by a cartridge containing carbon dioxide gas and are used to extinguish the same type of fires as the soda acid type.

Stereo Molding Combinations

A number of molding combinations for high and low shrink stereotype mats were discussed by Carl Borckhardt of Certified Dry Mat Corp. Some of these were as follows: One or two sheets of Kraft paper, $\frac{3}{16}$ in. hard cork and an 0.062 in. fibre or Bakelite board. In some cases 0.032 in. board is used with this combination.

Plastic blanket, one to four 0.032 in. slip boards with an 0.090 in. Deepmold Creeper on top. If the plastic blanket doesn't give the desired results, the Deepmold Creeper is placed next to the mat with a plastic blanket on top of the boards. One stereotyper is using a $\frac{1}{4}$ in. cork and two 0.062 in. fibre and Bakelite boards with good results. Another is using a $\frac{3}{16}$ in. hard cork, 0.062 in. and 0.032 in. red fibre board on a rebuilt roller with a $\frac{7}{16}$ in. shrink mat and also obtaining good results.

A widely used combinations is as follows: One sheet of kraft paper, $\frac{1}{8}$ in. hard cork, Tingue Brown blanket, 0.034 in. steel board and another Tingue Brown blanket on top. Still other combinations: 0.090 in. Deepmold Creeper, 0.090 in. red fibre board and another 0.090 in. Deepmold Creeper. Another is as follows: 0.062 in. Deepmold or 0.062 in. Imperial Creeper, $\frac{3}{16}$ in. hard cork and most any type of board on top. Another combination consists of $\frac{1}{4}$ in. hard cork, 0.034 in. steel board with one or two Imperial Creepers on top. The cast consists of 0.090 in. Deepmold Creeper, one each 0.062 in. and 0.032 in. red fibre boards with $\frac{3}{16}$ in. hard cork.

Scan-a Graver Color Plates

A report on Scan-a-Graver three-color printing plates was given by Keith LaFountaine, Mechanical Supt., Royal Oak (Mich.) *Tribune*. In turn, LaFountaine read excerpts from a report of ANPA's Research Director C. M. Flint on *A Color Process for Small Newspapers*.

The report concerned the work done by the ANPA Laboratory in cooperation with Fairchild Camera and Instrument Corp. in obtaining color printing plates on its Scan-a-Graver machine. The report, in part, follows: "The color print or color positive is mounted on the scanning cylinder. Using suitable corrective lenses, it is scanned once to produce directly the yellow plate. It is scanned two more times for producing the blue and red plates in

Printing Equipment *Engineer* Honored

Printing Equipment Engineer was honored during the recent Great Lakes Newspaper Mechanical Conference at Hotel Claypool, Indianapolis, Ind., January 10 to 12.

The award consisted of the presentation of a hand engraved bronze plaque mounted on a black walnut panel shown in the illustration above. The wood panel measures 15 in. wide by 10 in. high. The bronze plate itself measures 10½ in. wide by 7¼ in. high.

On behalf of Great Lakes President Horace Parker (Richmond (Ind.) *Palladium-Item*) and the Board of Directors, Past President George Fuller (*Cleveland Press*) presented the plaque at the Annual Conference Banquet for "Outstanding service to the Great Lakes Newspaper Mechanical Conference". Response to the presentation was made by Editor MacD. Sinclair in behalf of Publisher Don Will and the entire staff of *Printing Equipment Engineer*.

If we may be permitted to express our feelings in our own language, all of us at *Printing Equipment Engineer* feel humbly proud in having received the plaque from a fine group of production and mechanical executives who are associated with some of the world's finest newspapers.

It is our continuing major objective to make this magazine as useful and technically informative as possible and to advance the interests of plant executives everywhere.

succession. No color separation, masking or retouching is necessary. After mounting the color plates, you are ready to print."

In Flint's report it was maintained this work proved that small newspapers could afford color by use of Scan-a-Graver plates. Even though these plates have been tested in the field, he said the testing program would continue.

"I AM FOR ROBOTS—"

By Frank J. Phillips, Sales Engineer, Teletypesetter Corporation, before Great Lakes Mechanical Conference, Indiannapolis, Ind., January 1954.

It has been said: Not everybody wants Teletypesetter equipment. That is a true statement. So it was true of the Linotype when it first became available.

With yesteryear's production and today's wages, not many could afford the price of printing and possibly we would not be here to discuss linecasting machines nor the Teletypesetter.

With a Model T Ford and yesteryear's roads, I could drive from Chicago to Indianapolis in about two days. But, instead I flew from Chicago to Indianapolis today in less than an hour.

The linecasting machine manufacturers build 12-line-per-min. machines for manual as well as for Teletypesetter operation. If it were possible to operate those machines normally at that speed we could not sell you Teletypesetters because of the small amount of profit margin.

Yesteryear's printer worked seven days a week. Today's printer has plenty of time for relaxation. I am for robots so we all can work three days per week and spread employment to a degree where it will be unheard of for anyone to be out of a job.

Improving Slug Quality In High Speed Operation

THE linecomposing machine machinists had a field day at the machinists' session during the Great Lakes Mechanical Conference, Hotel Claypool, Indianapolis, Ind., Sunday afternoon, Jan. 10. Interest in what the machinists discussed ran high. Attendance was marked by the presence of production managers, mechanical superintendents, composing room superintendents, stereotypers and photoengravers. Increasing necessity for improving slug quality because of stepped up Teletypesetter composing room operation provided a highly interesting and informative session.

Presiding as Chairman and Co-chairmen respectively were George B. Bolton, Chief Machinist of the South Bend (Ind.) *Tribune;* Harold Gaddis, Chief Machinist, Anderson (Ind.) Newspapers, Inc., and Theodore (Ted) Gardiner, Chief Machinist, Indianapolis, (Ind.) Newspapers, Inc.

Slug Solidity

The first speaker was Harold Gaddis who gave the causes (no less than 33 of them) for defective slugs on linecomposing machines. Unless machines are maintained in good order, solid slugs which will withstand stereotype molding pressure cannot be produced. By following Gaddis' suggestions, there is no reason why slugs cannot be produced which will withstand stereotype molding pressure.

A question was asked from the floor as to how to clear letter characters on Sans Serif faces on 30 pt. to 36 pt. headletter slugs. The question was asked with respect to information which could be given other than the standard methods pursued by machinists in avoiding the casting of frosty letter characters on headletter slugs. It was suggested that an extra jet be drilled into the mouthpiece at an angle about 12 pts. above the regular jets in the center of each rib on the slug. In addition it was suggested that the mouthpiece be stoned once a month. One machinist took exception to the above suggestion by saying that where two jets of molten metal are injected into the mold cell simultaneously that air instead of being displaced from the mold might be trapped, thus causing bubbles which would weaken the slug structure under stereotype molding pressure. It was also suggested that in lieu of the extra holes that the regular jets be drilled out with a No. 42 drill.

One Hundredth Slug Sticks

Speaking from the floor, one machinist stated that on a manually operated Comet Linotype machine running straight matter at 7½ lines per min., with a new mold, he is having trouble with slugs commencing to stick at ejection after about 100 slugs have been cast. He was advised to check alignment of the ejector blades so as to prevent spread of the slug when the ejector blade first strikes the slug itself. Another suggestion was made that the machinist adjust the banking blocks so that when the mold disk advances for ejection the blocks will be contacted equally top and bottom by the mold itself. Another was that the machinist make certain the temperature of the mouthpiece is correct. The heat may vary from day to day. The switches on the electric pot heat control may cause trouble.

Mold Wiper Compounds

Discussion arose from the floor as to the value of a number of compounds of silicon antioxidant content for use on front and back mold wipers. Those mentioned in the discussion were: No-Mel (available from T. & R. Products, 3915 Wisner St., Saginaw, Mich.); Metl-Off (Automatic Saw Sharpening Co., 735 E. Ohio St., Indianapolis, Ind.); and Matrisil (available from Matrix Contrast Corp., 154 W. 14th St., New York 11, N. Y.). It was stressed that all of these compounds are intended to *prevent* the accumulation of metal and oxides on pot crucible mouthpieces, molds and spacebands and are not intended to remove metal which has already accumulated on these machine parts.

Timing Mohr Saw

Harold O. Mohr of Mohr Linosaw Co. presented a very fine discussion on the subject *Timing the Mohr saw.* His description was graphically illustrated by a number of slides projected on a screen. After Mr. Mohr had concluded his discussion, a

Officials of the 9th Annual Great Lakes Newspaper Conference are shown in a happy mood. From left to right: Conference Program Chairman Lee Doll, recent production manager of Indianapolis Newspapers, Inc., and now Sales Representative, Intertype Corporation; ANPA Research Director C. M. Flint, New York, N. Y.; Immediate Past President Horace H. Parker, Press-Stereo Supt., Richmond (Ind.) *Palladium-Item;* and Past President LeRoy Coates, Pressroom Supt., Grand Rapids (Mich.) *Press.*

number of questions were asked and answered regarding efficient cutting operation of the Mohr saw.

High Speed Teletypesetter Operation

Intense interest was shown when George Bolton, Chief Machinist, and Mechanical Supt. George Kunz jointly explained operation of *High Speed Teletypesetter Composition* in the composing room of the South Bend (Ind.) *Tribune*. It was explained that the *Tribune* publishes three editions per day with 34 to 60 pages, and from 90 to 112 cols. of newsmatter are set each day.

In the opening part of his address Bolton stated: "If you want to test your ingenuity, ability and patience, (and maybe a little vocabulary too) just go to high speed Teletypesetter operation". Bolton explained that high speed operation was started in October 1952 at the *Tribune* with five machines running at 12 lines per min. He said: "We started at 12 lines per min. and stayed with it. After a machine has been broken in at high speed operation, eventually it develops a rhythm. There were many things that had to be ironed out and many more problems to be solved before this will be as smooth an operation as we would like it to be."

Bolton discussed a number of the problems that arose due to high speed operation. He said some machine parts had been broken but the difficulties are being overcome gradually. The five linecasting machines which operate at 12 lines per min. consist of three rebuilt and two new machines.

A moving picture showing the high speed linecomposing machines in operation was exhibited. Bolton did a creditable job in describing the modification made on the TTS operated machines in the *Tribune* plant. These modifications, he felt, were essential to smooth high speed operation and have eliminated quite a number of assembling problems. One of these is a pneumatic drop when the elevator is to be seated in normal position. He discussed the design of a tapered chute block deflecting plate in the assembler entrance which deflects the matrix further to the left than normally occurs as the matrix is entering the assembling elevator. The reason for changing the design of the deflecting plate is to permit the spacebands to drop readily into the assembling elevator. Along with this improvement Bolton ground the tapered lower left surface of the long wedge on the spaceband so that the edges at the lower end of the spaceband would be parallel upwardly for a distance of approx. ¾ in. Another modification described by Bolton is a brake which moves inwardly against the lower ends of the spacebands after the matrix line has been transferred from the first to the second elevator in the transfer channel. The brake is operated as the second elevator bar plate seats upon the transfer channel. High speed shifting of the matrix line causes the lower ends of the spacebands to swing considerably and the brake in preventing the swing permits smoother transfer into the spaceband box.

It was explained that four TTS perforators are operated at the *Tribune*. The operators were trained by the *Tribune* and formerly were manual machine operators and floor men who learned the tape perforator keyboard. Several of the perforator operators are producing between 2600 and 3000 lines per 7¾ hr. day.

Bolton also explained that there is an early run each day starting at 5:30 o'clock a.m. which consists of a machinist and a monitor who run off approx. 2200 lines of wire tape which came in during the night over the wire. The type in slug form is ready for use at 7 in the morning when the regular day shift starts work.

Bolton's presentation of the moving pictures showing operation of the *Tribune* machine together with discussion was of absorbing interest to everyone at the meeting.

Don't "Block" Machines

Co-chairman Gardiner discussed maintenance of linecomposing machines and how to secure the best results. He said he doesn't believe in dividing the plant into blocks of machines and giving a machinist charge of each block. This sort of arrangement creates a situation whereby a machinist may have all of his machines running in fine order, so he may relax by reading a funny paper. In some cases he doesn't want to help another machinist in charge of a different group of machines. Gardiner prefers to have the machinist work over the entire plant as a team.

Attending the annual Great Lakes Conference banquet were (left to right) Cecil Watkins, Mechanical Supt., Sidney (O.) *Daily News;* William A. Dyer, jr., General Mgr., Indianapolis Newspapers, Inc.; and Franklin D. Schurz, Business Mgr., South Bend (Ind.) *Tribune.*

Improvements for Manually Operated Machines

Gardiner wanted to know why the machine manufacturers couldn't put improvements on manually operated machines that are put on the automatically operated ones. "If manufacturers can put a gadget to prevent tight lines on a TTS operated machine, or another gadget to act as a brake to prevent clutch trouble, why can't these improvements be put on the manually operated machines as well?" he queried.

Improvements in Linotype

Carl Myers, Field Eng. for Mergenthaler Linotype Co. exhibited views of recent improvements on Linotypes, which were projected on a screen with running comment. Myers' explanation together with the illustrations of the improvements made by Mergenthaler Linotype Co. were intended to show what the company had done to make manual operation of the machine more flexible.

Bending Spacebands

The bending of spacebands during machine justification was the first question to be presented to the Maintenance of Composing Room Equipment section of the machinists' session. Assisting Chairman Gardiner were Carl Meyers, Mergenthaler Linotype Co.; Walter Severin, Intertype Corporation; Harry C. Perry, Ludlow Typograph Co.; and Frank J. Phillips, Teletypesetter Corporation. With regard to the bending of spacebands it was suggested that the person asking the question (which had been submitted previously in written form) "quit fooling around" with the justification spring tension. Carl Meyers suggested that on the Linotype the tension of the justification spring be regulated so that approx. ¾ in. of the threaded section of the rod be visible above the adjusting nut. Mr. Severin said the same average adjustments were similar for the Intertype. He also remarked "you can't have one spring tension for a one-spaceband line to justify an 18 or 20-spaceband line. When set for the latter number of spacebands the justification spring tension is too strong for one-band lines."

It was suggested that the machinist stop a machine when a four or five spaceband line of column width has been justified. At this time a buttonhook can be inserted into the top of one of the spacebands to see if it can be pulled up just a little distance. If it cannot be pulled upward very much the tension is OK. Just as in many other adjustments on linecomposing machines, personal judgement must be used.

Newspaper production problems are discussed at the Great Lakes Conference in Indianapolis by (left to right) John E. Innis, Stereotype Foreman, Indianapolis *Star-News;* Bob Blackburn, President, Automatic Saw Sharpening Co.; and Virgil V. Perkins, Composing Room Supt., Indianapolis *Times.*

Why De-lime Casting Box?

By ROBERT M. FRAME*

Asst. Production Mgr., Zanesville (O.) Pub. Co.

AT THE RECENT Great Lakes Conference, Indianapolis, the subject came up as to the best way to de-lime a stereotype casting box. There were many ideas advanced as to different methods of removing the lime.

However, I think it is always better to prevent trouble than to correct it as we have been able to do with our casting box at the Zanesville Pub. Co. Although the Chamber of Commerce may be reluctant to admit it, Zanesville's water contains more lime than that of most other cities. Therefore, I believe if we could overcome the problem here, the same could be done in most other places.

For many years we had a casting box that was continually getting entirely stopped up with lime scale. At times, we even had to drill into the top of the box and rod out the lime. We would then have to reseal the holes. About six years ago, we purchased a new Pony Autoplate. At the same time we installed Micromet Feeders in the water line where the line enters the Pony. This solved our lime scale problem entirely. In these six years, we have not even had a slowing down of our water circulation.

Micromet is not a water softener, but holds the lime in suspension so it is not deposited on the interior walls of the box as the water flows through. It is a simple and reasonably priced installation. We use two No. 1 feeders, piped in parallel. These cost about $18.75 each, and can be installed in about 1 hr. The feeder is cone shaped, is about 8 in. diam. and about the same height.

It takes about 5 min. a month to service these. We use ½ lb. of Micromet to recharge them each month. It retails for about $8 per 3 lbs., which is a 6 mo. supply for us. Micromet is a product of Calgon, Inc., 1943 Hagan Bldg., Pittsburgh 30, Pa.

Micromet, along with the feeders, may be purchased at any leading plumbing dealers. These feeders may be used also on Elrods, Ludlows, or any machine using water as a cooling agent.

The Need for Quality Control Standards And Cooperation

By FERD MIER, *Stereotype Supt., Detroit* Free Press *and* LLOYD WRIGHT, *Stereotype Supt., Fort Wayne (Ind.)* News-Sentinel. *Paper delivered before Great Lakes Mechanical Conference, Hotel Claypool, Indianapolis, Ind., Jan. 1954.*

IN THE MECHANICAL departments of a newspaper no one department can stand alone. Of the four major departments, the photoengraving, composing, stereotype, and pressroom, all are interrelated and dependent, one upon the others, for more than just the normal work flow.

It might be assumed by the neophyte that once the photoengraving department has released its cuts there is no further dependence on the other departments, or once the composing room has released the last page of the edition that its responsibilities are at an end. Fortunately, this is not the case.

Among all departments lies a common denominator — one that is too often neglected or overlooked in today's demands for high production and quality reproduction. That common denominator, in your plant and in mine, consists of two major items, standards and interdepartmental cooperation; these are on an equal basis, one does not overshadow the other. In actual operation, to successfully establish and maintain standards, one must have the full cooperation of the other departments.

The stereotype department of a newspaper plant is the transfer point of the operation—the point that transfers the flat form components of type, photoengraving, and ad materials into a curved printing plane suitable for mass reproduction. The process is fundamentally simple, but one with many complex variables which are difficult to control. It is in the control of these variables that we are mostly concerned.

A detailed breakdown of these variables is not feasible here. The main divisions, however, are:

(1) Materials purchased from suppliers

(2) Operational control of materials and

(3) Requirements of other departments.

More difficulty is experienced with materials from suppliers than from any other factor. In this category we have molding materials, which include mats and blankets, as well as packing and type metal.

Dependency for Material

All of these items are beyond the control of the purchaser. We are dependent upon the good faith and general practice of the manufacturer to supply us with material that meets our specifications for our particular operation. Type metal is one example of this dependency. Samples of metal are sent to the supplier for analysis and in turn proper plus metal is sent in exchange for dross to maintain a standard formula. How often do you submit a sample to an independent laboratory or to another source for checking purposes? Probably not at all, or only when trouble develops in your plant.

Packing Material

Packing material is ordered by thickness and width. Do you ever check to see if the material supplied meets the standards you have ordered? The answer would be seldom, if ever. Many of us are packing the head and foot bolsters of mats and have altered the bolster strips of the casting boxes to accommodate a standard, specified thickness. Any deviation from this standard can cause immeasurable trouble in the casting operation and in the pressroom. If you specify packing 0.050 in. thick for this purpose, do you ever check to insure that each order conforms to the requirements of your operation? The results of such a check would amaze you. Again, this is an example of standards of operation.

Molding Material

When we consider molding materials, mats and blankets, we are definitely out on the limb of dependency as far as the supplier is concerned.

Molding blankets are sold by every supplier in the country. They range in grade or degree of hardness from extra hard to soft. In the majority of cases this degree of hardness is determined by the weight of the blanket. Thus, a cork blanket 21 in. x 25 in. x ¼ in., weighing 4 lbs., might be graded as extra hard, while one the same size weighing 3½ lbs. might be graded as soft, depending upon the particular supplier from which the blankets are purchased.

No attempt is made to standardize the qualities of resiliency and compressive characteristics which each grade of blanket should meet. Each supplier grades blankets as he sees fit. Some sources grade them as A, B, C.

Little can be done to standardize the grading of molding blankets on an individual basis. Much can be done by concerted action or a regional or national conference.

Mat Specifications

Mats as supplied to the stereotypers are made to specification. However, the caliper specified includes a tolerance of plus or minus 0.002 in. Thus, if you specify a mat 0.031 in. thick it may be 0.029 in. or 0.033 in. Troubles in your operation can be multiplied tremendously by the supplier sending in mats at both limits of the tolerance scale.

Due to the problems that appear to be in mat manufacture, we specify the amount of shrinkage required across a form of a certain width. From shipment to shipment the moisture content of the same brand of mats may vary as much as 4% to accommodate the changes in the pulp to meet required specifications. Surely a better control procedure can be instituted by the manufacturers to supply us the mats that have some semblance of standardization in regard to

Shrinkage

Compressiveness

Stay back

Molded depth retention

Resistance to wear, and

Release characteristics

No one believese the mat manufacturers are not attempting to improve their products. Competition alone makes it necessary. It does seem, however, that progress is unusually slow and comes only when the demand for a better product is the loudest.

Quality Control of Operations

Quality control of our individual operations sounds like a tremendous project. In reality, we practice it to some extent at all times, but usually it is not thought of in this particular term. Our operation is based upon certain standards that are inherited from past practices and may or may not be of value in establishing and maintaining quality control standards.

Historically, we work with standards that are based upon the practice of printing from the form. Only one standard of height was acceptable, type high. All type, column rules, leaders, in fact all printing components, were made to this standard.

With the advent of the rotary press using stereotype plates this standard of height was still maintained. Little concern was felt for the needs of the stereotype operation. During the past 30 years,

since the acceptance of the dry mat, a few voices have been heard demanding a set of standards for the stereotype operation. Little has been accomplished to find standards that will give the proper reproductive results for the stereotype operation in our plants.

Existing Standards

From long study and experience, the following standards of printing components in the flat form are deemed acceptable as quality control standards:

News or body type, 0.918 in.

Column rules, 6 pt. body, 0.914 in.
3 or 4 pt. body, 0.915 in.

Leaders, 0.912 in.

Type faces over 12 pt., 0.9195 in. to 0.920 in.

Stereotype chases to be full 0.918 in.

Halftones to base over type high. This must be determined in your own plants according to the mat you are using, type of base material, molding combination in use, and the subsequent operations after molding.

Space depth of the form is a problem under certain conditions. With a soft or medium hard combination, space depth should be no greater than 0.065 in. With a hard or extra hard combination, space depth does not pose any problem. The combination simply does not depress, mold or flow the mat into the full depth of the spaces.

Full cooperation of the composing room is required to obtain and maintain these standards. A mutual understanding is necessary to obtain the adherence to standards other than those just stated. Too often, compositors are prone to state that a 12 pica slug is 2 in. Actually, it is 1.992 in. or 0.008 in. under 2 in. Multiply this by 8 cols. and the type form is $\frac{1}{16}$ in. oversize and necessitates $\frac{1}{16}$ in. additional shrinkage in the stereotype operation. Control of type width is as important as control of type height.

Pressroom Requirements

While the stereotype operation is demanding certain standards from the composing room, it is also subject to the demands of the standards for the pressroom. Here again we see the need for complete cooperation between departments for quality control.

Each of us may have a different set of conditions imposed upon our respective departments as to the standards our plates must meet.

Plate thickness and tolerances, space depth, plate surface, and resistance to surface wear are four essentials prevalent in all plants. Three of these are controlled by the requirements of the pressroom. The fourth, resistance to wear, is controlled by the stereotype department. Plate thickness of 0.4375 in. has been determined by equipment engineers as a standard, although this is deviated from in some instances by demands of the packing in use on the press and to the necessity for feeding more or less paper to the folder. Space depth, much or little, is dependent upon roller setting and the degree of softness or hardness of the press packing. The necessity for plate surface quality is an intangible. A surface that will print in one pressroom may not print in another. In general, the best standard for plate surface is the smoothest obtainable with full reproduction of the halftone dots permissible with the operation in your plant.

Resistance to Plate Wear

Resistance to wear, as stated previously, is under the complete control of the stereotype department. Improper cooling of the plate in the casting box can cause a soft surface on the plate with rapid wear or beating down on the press. It is necessary to follow the standard practices of metallurgy to obtain the hardest surface possible on the plate. Rapid cooling of the plate surface, with slow cooling of the cylinder side should be standard practice.

How cold to operate your casting box jackets and at what temperature to operate your cylinders is a matter for individual plant determination.

There are a number of items in the stereotype operation that should be performed under standardized procedures. Most of them are being so operated today, in some fashion. Sta-Hi temperature and time, pre-drying operations, metal casting temperatures, and casting box control are a few examples.

The Need for Instruments

Unfortunately, the control of most standards of operation are visual. To adequately maintain standards certain instruments for measurement are necessary. Gauges and micrometers are essential to check thickness and depth. Temperature gauges, water pressure gauges, pyrometers, and other control tools should be a part of the quality-control program and be used on a prepared schedule of maintenance as necessary aids to all departments.

No one department is all-important. Only through complete inter-departmental cooperation can success in quality printing be achieved. The use of standards of operation in your plant is a matter of necessity depending upon the quality of reproduction your publisher demands.

Stereo Session Highly Helpful

FIVE SPEAKERS and considerable floor discussion occupied attention of the stereotype executives. In addition there was also a liberal representation from all of the other mechanical departments at the Great Lakes Mechanical Conference, Tuesday, January 12, Hotel Claypool, Indianapolis, Ind. Chairman of the meeting was Ferd Mier, Stereotype Supt. of the Detroit (Mich.) *Free Press*. Co-Chairman was Lloyd Wright, Stereotype Supt. of the Ft. Wayne (Ind.) *News-Sentinel*.

Modifying Platemaking Equipment

The Effect of Narrowing Newsprint Upon Wood Autoplate Machines was the title of the address delivered by William W. Kihn, Asst. to the Sales Mgr., Wood Newspaper Machinery Corp. Kihn discussed the changes necessary in Wood Pony, Junior and Automatic Autoplates, and the Standard and Heavy Duty Autoshavers when reducing newsprint roll widths. Reduction in newsprint roll widths can be obtained by reduction of page margins, reduction of printed page widths, reducing column width, by using thinner column rules, indented slugs or increasing the mat shrinkage. In every case, this reduction of newsprint width specifically affects the plate casting equipment. His address was complete with reference to changes in Wood stereotype plate casting and shaving equipment.

Executives Get Together

Roy Schulz, Pressroom Supt., Milwaukee (Wis.) *Journal* discussed *The Need for Inter-departmental Co-operation*. He stated that in order to secure maximum production and quality printing results it is necessary to have the understanding cooperation of all department heads in the newspaper plant. In the *Journal* plant he and Harry Wrasse, Stereotype Supt., get together frequently to discuss not only regular edition work but color work as well. Sometimes William Westerman the Color Technician or Henry Arbogast, Photoengraving Supt., consult with all of the department heads before an anticipated color run. Mr. Schulz said all *Journal* executives try to anticipate problems and discuss them ahead of time so that down-time of equipment during a press run can be eliminated. In his discussion, Schulz passed along an idea which might be valuable to other pressroom executives. In case a flat roll is encountered, the roll is removed and is used on some pre-date edition where time permits running the press at slower speed.

Interrelationship of Composing and Stereo Depts.

This was the somewhat elongated subject of an address by Deo A. Padgett, Composing Room Supt., Cleveland *Plain Dealer*. Padgett first outlined what the stereotype department could do for the composing room. He then enumerated a number of practices which can be instituted by the composing room for the benefit of the stereotype department. That is, if any or all of the suggested procedures are not now in effect. In his homespun humorous manner, Padgett threw several darts at the stereotype executives during the course of his discussion. He said that 40 years ago stereotypers molded and cast plates by hand methods. At that time they complained about the hard work they were doing. Today, with fine new and modern equip-

ment where most of the physical exertion has been eliminated, they still complain. Padgett observed that with all the improvements in stereotyping technology they still stick to one antique idea — that of cutting bases for mounting plates. "In all my life," pursued Padgett, "I have never heard of a stereotyper being laid off on account of a printer cutting a base to the right size. Neither have I ever heard of a printer being laid off on

(*Continued on Page 72*)

Craftsmen at the Milwaukee Printing Week Banquet included (left to right) Thomas P. Mahoney, Intl. First Vice Pres.; Richard Wells, Milwaukee's Printing Week General Chairman, Wells Badger Corp.; Walter D. Fuller, Chairman of the Board, Curtis Publishing Co., principal speaker; Earl Ellis, Intl. Sixth District Representative; and H. Wyn Brooks, Milwaukee-Racine Club President.

1954 Printing Week Celebrated Nationally

THE 1954 celebration of International Printing Week, Jan. 17-23, was marked in many of the nation's cities by programs. The observances brought to the attention of homes, schools, industry and business the importance of printing. Graphic Arts organizations, led by the Intl. Assoc. of Printing House Craftsmen, reached new heights in presenting events which focused attention upon their industry. It was the 248th anniversary of the birth date of Benjamin Franklin, now commonly referred to as the patron saint of American printing, and members of the printing industry and allied trades proudly called attention to his exploits as well as to the important impact printing has had upon civilized progress.

How well the scores of different local Printing Week committees did their job is evidenced in the flood of printed publicity material sent out from all corners of the country. *Printing Equipment Engineer* presents here the highlights of some of these observances.

Los Angeles—York, Pa.

More than 800 Los Angeles County printers were in attendance for the fifth annual Graphic Arts Banquet when a number of awards were presented to students and outstanding community leaders. Among these was the Gutenberg Award which went to Gordon Holmquist, Past President of the Intl. Assoc. of Printing House Craftsmen. Several college scholarships were also included. Another feature of the week was an exhibition of the Best Printing Art in 1953.

Fred W. Hoch of Fred W. Hoch Associates, Inc., was principal speaker before York (Pa.) Craftsmen's celebration of Printing Week. His topic was *Men, Methods and Machines in the Graphic Arts*. An exhibit, which included the magazine show of the American Institute of Graphic Arts was again sponsored as part of the meeting.

Cincinnati—New Orleans

The Cincinnati (O.) Printing Week group cooperated with the Cincinnati *Enquirer* in presenting an 8 p. section in its Sunday edition devoted to the Graphic Arts industry. The front page of the section, printed in color, was made up of the famed marks which identified the art and craftsmanship of early printers. In addition to the International observance, Cincinnati was also celebrating 160 years of printing in that city.

Seven Graphic Arts organizations of New Orleans combined forces in presenting a week-long program. Activities ranged from presentation of the mayor's Printing Week proclamation in ceremonies before the city's statue of Benjamin Franklin to special displays arranged in store windows and lobbies of major business establishments.

Washington, D. C.—Detroit

A. E. Giegengack, former Public Printer of the United States and now Vice Pres. of the Army Times Publishing Co., addressed the Printing Week observance dinner of the Washington (D. C.) Craftsmen's organization. The event was also an anniversary for Giegengack who had addressed the same group 25 years ago on the same occasion.

Detroit noted 1954 Printing Week by arranging a banquet sponsored by five Graphic Arts groups in the city. Speaker was U. S. Public Printer Raymond Blattenberger and in attendance was Detroit Mayor Albert E. Cobo.

Milwaukee-Racine—Cleveland

A dozen organizations collaborated with the Milwaukee-Racine Craftsmen's Club in observance of International Printing Week. Several radio and television programs took note of the celebration by devoting part of their air time to the local Graphic Arts industry. An address on *Franklin's Spirit Points the Way for Tomorrow* was given by Walter D. Fuller, Chairman of the Board, Curtis Publishing Co., at the Ben Franklin Banquet. Other activities included library, store window and school displays showing how printing is used by business.

Cleveland presented its biggest Print-

(*Continued on Page 67*)

Cleveland Picks Printing Queen—The selection of a young lady to reign over its Graphic Arts industry was one of the popular activities of Cleveland's Printing Week observance. From left to right are Contest Judge Maury Condon, General Mgr., T-V Guide; attendant to the queen, Elizabeth Ann Huth, Interstate Advertising Co.; Master of Ceremonies for the judging Clay Herrick, Account Executive, Fuller-Smith-Ross, Inc.; Miss Graphic Arts of 1954 Ellen Terry, Horn-Ohio Co.; Contest Chairman Ray Saks, President, Allied Decals, Inc.; attendant to the queen, Beatrice Mitchell, Will, Inc.; and Printing Week General Chairman Ed Owen, Assistant Editor, ***Printing Equipment Engineer***, all of Cleveland.

Thomas P. Mahoney

Thomas P. Mahoney has been named Vice Pres. of The Regensteiner Corp., Chicago, according to an announcement by President Irving Winter. Mahoney has been associated with Regensteiner for four years, first as Plant Mgr. and for the last two years as Technical Sales Executive. He

THOMAS P. MAHONEY

has been active in technical and educational work in the Graphic Arts and presently is First Vice Pres. of the International Association of Printing House Craftsmen, Inc., and a member of the Awards Committee of the Lithographers National Association. Before joining Regensteiner, Mahoney was General Mgr. of American Color Process Co., Cleveland, and also had held several managerial positions in the East.

Francis M. Collins

Francis M. Collins recently was appointed Pressroom Supt. of the Boston Herald Traveler Corp. Announcement of the promotion of Collins to this responsible position was made by Mechanical

FRANCIS M. COLLINS

Supt. Reg Tranter. Collins was born Sept. 2, 1898. He entered employ of the *Herald-Traveler* in 1915 as a night mail clerk while attending high school. In 1917, he started learning to be a newspaper pressman and has been engaged in presswork ever since. During the past eight years he was day foreman. In November 1953, he succeeded to the position of Superintendent when George Frederick Stewart passed away. Collins was possessed of extra energy which he devoted to the study of law. In 1937 he graduated from Northeastern Law School and in 1938 he passed the bar examination and was admitted as an attorney in Massachusetts. His many friends will be glad to learn about his advancement as a mechanical executive.

Correction

In the December issue of *Printing Equipment Engineer*, page 103, there was an error in the caption for Fig. 4 in the article, *A Unique Film*, by R. E. Maurer and J. A. C. Yule of the Research Laboratories, Eastman Kodak Co. Fig. 4 is reprinted at the left with the corrected caption, which reads:

The legends for the two reproductions were transposed. If you wish to file the article, please paste this corrected caption for Fig. 4 over the original Fig. 4, page 103, December 1953 issue.

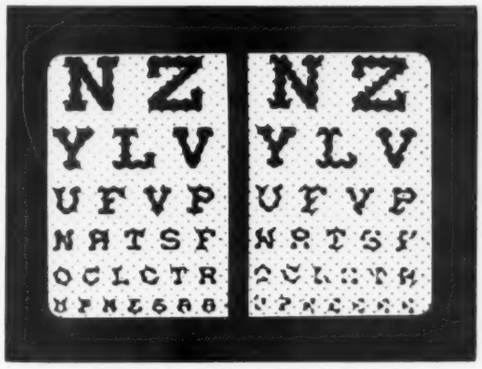


Fig. 4.—Rendering of fine detail with Autoscreen Film (left) and with a Kodak Magenta Contact Screen (right).

Please take a look at your address on the wrapper in which *Printing Equipment Engineer* is sent to you at your place of employment. If it isn't correct, please tell us about it on a postcard.

6 Col. Tabloid

THE Lansing (Mich.) *State Journal's* Sunday tabloid section has been changed from 5 col. to 6 col. format. Mechanical Supt. Rock Wales said that the change makes a neater appearing page in comparison with the former 5 col. page. Greater flexibility of makeup is permitted. The greater composition cost per page is more than offset by the saving in newsprint. The margins in the case of this tabloid section are more even.

At the *State Journal*, 64 in. newsprint is used. It was found that by employing 1 in. mat shrinkage, introducing the 10½ pica column width and allowing approx. 8 pts. white space between columns, that the 6 col. page could be made to serve a practical purpose. The 1 in. mat shrinkage, or course, in the case of the tabloid operates from top to bottom of the page instead of crosswise as in the full size newspaper page. Mat processing at the *State Journal* is done with Goss roller, Alico Pre-shrinker and Sta-Hi Former.

Composition, stereotyping and presswork on the tabloid are excellent. The work of changing from 5 col. to 6 col. tabloid was done jointly by Wales and Asst. Mechanical Supt. Lyle Smith. Copies of the tabloid may be secured by addressing Mr. Wales at the Lansing (Mich.) *State Journal*.

Tabloid Shrinkage Chart

Below appears the Tabloid Shrinkage Chart as employed to obtain composition depths of advertisements in picas in the ad alley so that when the stereotype mat has been shrunk the advertisements will be of proper depth in the printed page:

Composition Depths For Advertisements

In.	Picas	In.	Picas
1	6.4	8	51.4
1½	9.6	8½	54.4
2	12.10	9	57.8
2½	15.10	9½	60.8
3	19.2	10	64.2
3½	22.2	10½	67.2
4	25.8	11	70.8
4½	28.8	11½	73.8
5	32.	12	77.
5½	35.	12½	80.
6	38.6	13	83.4
6½	41.6	13½	86.4
7	44.10	14	89.10
7½	47.10	15¼	97.6

Tabloid Column Widths

1 Col.	10½ Picas
2 Col.	21½ Picas
3 Col.	32½ Picas
4 Col.	43½ Picas
5 Col.	54½ Picas
6 Col.	65½ Picas

TABLE I.—Opacity of Various Papers of Same Weight

Paper	Basis Weight	% Contrast Ratio Opacity
Groundwood Book	25x38—50	95
Opaque Offset	25x38—50	92
Machine Coated	25x38—50	92
Opaque Bond	17x22—20	90
Regular Offset	25x38—50	89
English Finish	25x38—50	88.5
Super Book (Same Grade as E. F.)	25x38—50	87
Regular Bond		86
Glassine		46

Paper Properties as Related to Printability

By WILLIAM H. BUREAU*

**Butler Paper Corporations, Chicago.*

Part IV.—OPACITY

MOST every printer at some time or another must reckon with the property of Opacity. The show-through may be objectionable, the stock is too transparent for the job or some other statement is made. The previously discussed Properties of Smoothness, Ink Receptivity and Cushion insofar as they affect Printability, are not always easy to evaluate. However Opacity, lends itself to accurate measurement.

Opacity More Important In Recent Years

During the past 15 years, paper manufacturers and printers have become more conscious of Opacity for several reasons. From the printer's standpoint, there has been a trend towards lighter basic weight papers in order to conserve total weight of stock used on a job, to reduce postage and mailing costs, and to keep down the bulk of catalogs, manuals, etc. as they have increased in total number of pages. Naturally, as basic weight is lowered Opacity decreases and consequently manufacturers have had to find means of increasing Opacity to compensate for that lost due to weight reduction. At the same time, the manufacturer of paper has had to cope with the loss of Opacity due to increased brightness of paper resulting from improved methods of bleaching and customer demand for brighter and cleaner white paper. More will be said about this later.

What Is Opacity?

Opacity refers to the quantity of light transmitted through paper. In order to understand better just what it is and how it is measured in the laboratory, we shall consider, briefly, the physics of light as it falls on a sheet of paper. When light strikes the surface of paper there are three possible events that can take place: (1) Some light can be reflected directly back by the surface of the paper; (2) Some of the light can be transmitted through the paper; (3) Some of the light that enters the paper can be absorbed by it. If all the light is transmitted, we have a transparent medium such as cellophane (Fig. 6). If no light is transmitted as in Fig. 7, paper would be considered 100% opaque. Now we come to the average paper which falls between these two extremes whereby light striking the surface is disposed of in three ways as shown in Fig. 8.

You can compare the Opacity of two given papers by laying each side by side over printing such as type and heavy solids, and observe the relative degree of showthrough. The less opaque paper gives a greater showthrough. Since it is transmitted light that determines Opacity then we can measure it. The instrument known as the Opacimeter provides a standard light source and a means of measuring all light reflected back from the paper sample under test. Opacity is determined as follows: The sample is first exposed to the standard light source with its opposite side backed up by a white body. The amount of light measured by the instrument will be the sum of: (1) That directly reflected from the surface of the paper; (2) The light transmitted through the paper and reflected by the white body back through the paper to the measuring device as shown in Fig. 9. Then the white backing surface is replaced by a black surface which has the property of absorbing completely all light reaching it. Now the amount of light measured by the instrument will be only the original reflected portion since the transmitted light through the paper is absorbed. This condition is shown in

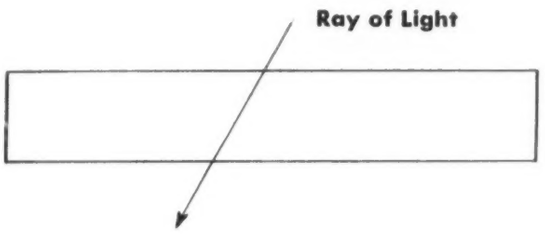


Fig. 6.—Transparent medium or zero opacity.

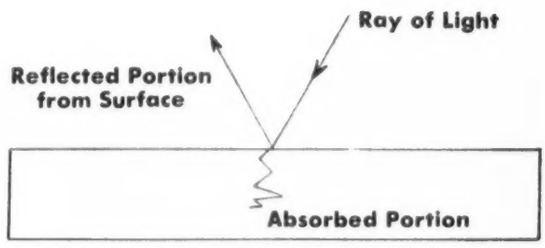


Fig. 7.—Diagram shows 100% opaque paper. Light is partially reflected and partially absorbed but none is transmitted by paper. (Exception: Black paper absorbs all light.)

Fig. 10 .The ratio of amount of light measured in Fig. 10 to that measured in Fig. 9 gives the contrast ratio Opacity.

Why Papers Differ in Opacity

What concerns you most is why Opacities of various papers differ. Pure cellulose fiber is actually transparent. Then why aren't papers made from such fibers transparent? The answer is some papers are almost perfectly transparent such as glassine and tracing paper. But why aren't other papers such as book and bond made from the same type of fibers transparent? Here we must consider the physics of light again. You know when a stick is partially placed under water it appears to bend. That is because the light rays as they travel from air into water are actually bent or *refracted*. Likewise, light rays upon entering the paper are bent back and forth, by passing first through a fiber and then through an air space. Many such light rays are gradually diffused within the paper structure and the greater degree they are refracted, the more opaque the paper becomes. A blotting paper is opaque simply because it has millions of air voids between fibers, but if the fibers were pressed very closely together eliminating the air voids and light rays could travel straight through to a much greater extent and with less bending, the paper would become transparent. Thus the denser we make paper, the less Opacity it has.

The groundwood fiber does give Opacity in itself. That is why newsprint is very opaque for its weight. If newspapers were printed on groundwood free paper of the same weight, then you would find it very annoying if not impossible to read a newspaper because of extreme show-through. Unbleached fibers give more Opacity than a bleached fiber. Dyes or coloring in paper will increase Opacity. Here we come to one of those instances whereby the brighter we make a paper by means of bleaching the less Opacity the paper will have. The gray-white papers of the last war seldom were ever criticized for "show-through" and the writer recalls one incident where a manufacturer deliberately had to "dirty up" a post-war white paper to obtain the necessary high Opacity standard established on a gray-white paper of the war time emergency.

Fortunately, other means are possible for a manufacturer to obtain Opacity. Most important is the use of fillers. Fillers add Opacity since they have the property of refracting light rays to a greater degree than air and paper fiber alone. The filler particles are extremely fine in comparison to fibers and by being dispersed throughout the paper structure exert their refracting power. Clay is the most commonly used filler but for maximum Opacity Titanium Dioxide is used alone or in connection with clay or other fillers. Titanium filler has greater opacifying power than clay and also, as will be mentioned in a later article, imparts greater brightness. The Titanium filler costs considerably more than clay and that is why titanium-filled papers usually sell at a premium over papers without it.

The greater the percentage of fillers in a paper the higher will be the Opacity. There are two limitations to the amount of filler than can be used: one is the increasing loss of filler through the paper machine wire as more filler is used with the result that the "law of diminishing returns" is reached; second, physically-wise, the strength of paper is lowered, particularly Mullen, Tear and Fold, after the percentage of filler goes beyond a certain range. The average percent filler in book papers such as Offset and English Finish will be higher than for Bonds and Ledgers. Bible Papers, Opaque Onionskins and Air Mail are heavily filled papers. On the other hand, certain papers must have minimum

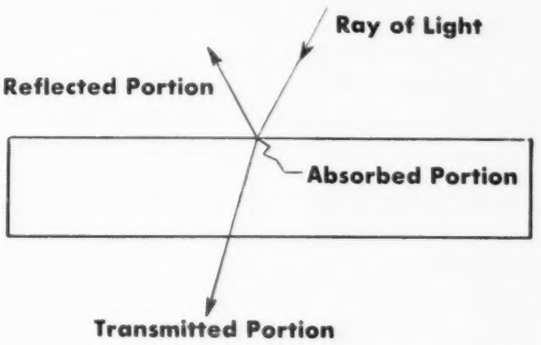


Fig. 8. — Partially opaque paper.

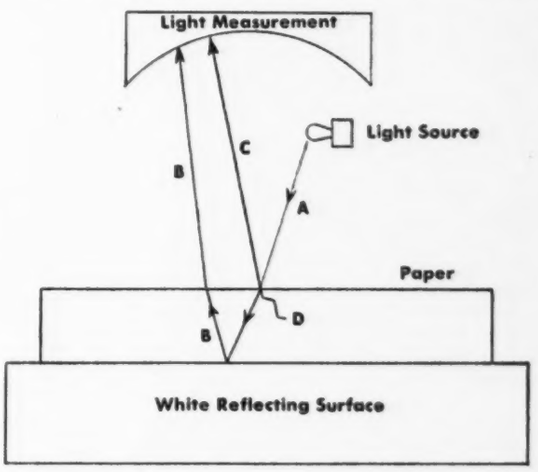


Fig. 9.—Contrast ratio opacity. Measured light in this diagram is indicated at *B* and *C*. (Example: Instrument reads 8.)

Legend for Figs. 9 and 10:
A—Original light to paper.
B—Transmitted light.
C—Light reflected by paper.
D—Light absorbed by paper.
From example: Opacity = $\frac{4}{8}$ = 50%.

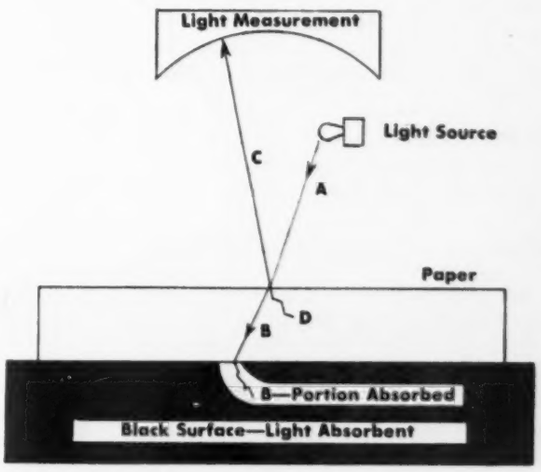


Fig. 10.—Contrast ratio opacity. Measured light is *C* only. (Example: Instrument reads 4.)

Opacity or be actually translucent such as Tracing, Glassine and papers used as originals in direct-print copying.

Opacity readings of different papers of same equivalent weight are shown in Table I. Notice the wide range of instrument Opacities depending upon type of paper, and whether a regular or an opaque grade is considered.

Certain phenomena in printing can reduce the Opacity of paper. A drop of oil on paper will make it translucent as you know and for that same reason excessive penetration of the vehicle of the ink will contribute to "strike-through". This is more likely to occur in inks that dry by absorption such as the printing of newspapers. Excessive squeeze from the impression such as on type-and-line matter will also increase "show-through" due to compressing of paper.

Conclusion

Opacity must not be overlooked when considering other requirements of the paper for its specific job. The nature of the printed form, whether light or heavy coverage of ink, whether job will be printed on one or both sides, the actual printing process, etc. all go to determine the minimum Opacity required. It is possible that an opaque paper, although it will cost more per pound than a regular paper, may actually represent less total cost if it will provide necessary Opacity in a lighter basis weight.

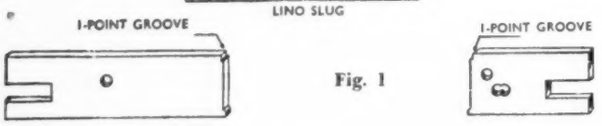


Fig. 1

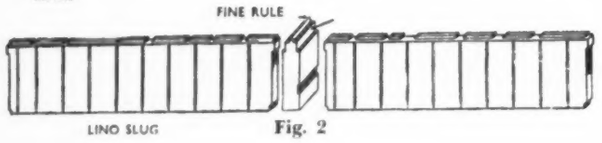


Fig. 2

Mold Liner Modification — We are indebted to the October 1953 issue of *International Bulletin* (England) for report of an Intertype mold liner modification (Fig. 1) which is intended to prevent the working up of column rules, leads or slugs between columns in the form. The same means for preventing column rule workups can be applied to Linotype mold liners. Reports the *Bulletin:* In the Government Printing Office of the Netherlands in The Hague most of the publications are printed from machine composition set to a standardized measure . . . A 1 pt. groove (notch) is cut at the ends of the composing machine mold liners. The slugs will then cast with a 1 pt. flange at each end . . . Matrices on the Monotype Super machines are made according to this system (see section of rule in Fig. 2). If two columns are to be butted or set flush against each other as in twin slug composition, the overhanging flange must be cut away on a saw-trimmer.

Vise Jaw and Mold Parallelism Gauge

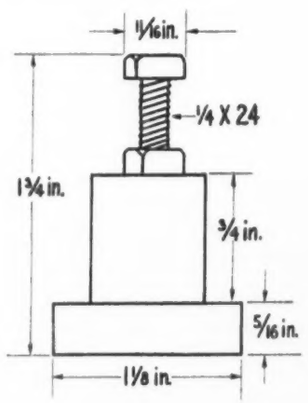
THE gauge illustrated in the accompanying diagram was made from round steel rod by R. B. Denton, Chief Machinist, Lansing (Mich.) *State Journal* and is for use in adjusting parallelism of the vise jaws and mold disk on linecomposing machines. The gauging surfaces of the instrument are adjustable. In smaller plants, use of the gauge would not occur frequently. Thus it really isn't necessary to harden the working surfaces.

In the interests of accurate type high measurement of slugs, the vise jaw and mold contacting surfaces must be in parallel relationship. Once properly adjusted, the parallelism will last indefinitely, but should be checked occasionally, especially when excessive metal fringes appear at either side of the slug before it is ejected from the mold, or when difficulty is experienced in adjusting the back knife to trim the slug to plus or minus 0.918 in.

The parallel condition of the vise jaws and mold is obtained by taking from or adding to the thin brass washers usually to be found under the left-hand vise locking stud shoulder.

With the machine in normal position, unlock the mold slide operating lever from the slide itself. Now, insert the gauge between one of the vise jaws and pull mold slide forward until the mold contacts the flatted-off screwhead on the gauge. While the mold slide still is in the same position, insert the gauge between vise jaw and mold on the opposite side. The feel of the gauge will indicate whether or not a parallel condition from side to side of the mold and jaws has been obtained. If not, the brass washers may be removed or added to in order to secure parallelism. Usually, the screwhead in the gauge can be adjusted until the distance from the top of the flatted-off head to the gauge base is 1¾ in.

Variations in the design of this gauge have been developed by others. The one illustrated, however, probably could be



used most effectively by a machinist who is not skilled at handling gauges. One kind furnished years ago by William Reid (Chicago) consisted of two separate and fixed cylindrical plugs. These were intended to be used simultaneously. Yet another kind consisted of two gauging plugs linked together by a bow spring to permit gauging parallelism by grasping the spring link between the two plugs spaced 20 picas apart. After long experience, a machinist may take an impression transfer. To do this, the vise jaws are opened to 30 picas (or 42 picas if a wide measure machine). The mold is coated with red lead paste on the front surface where it contacts the vise jaws at either side.

Appointment of Leo L. Norwich as sales manager for printing products to distributor trades was announced recently by Minnesota Mining & Mfg. Co. Norwich will be interested primarily in the company's dealer program for Lithographic Plates and its jobber program for Spherekote tympan blankets.

Heidelberg Sales Conference—James McCann (right), Manager of the Columbus (O.), Office of Heidelberg Eastern, Inc., is shown presenting a gold watch to Howard Altemeier, holder of the year's best sales record, at the recent annual sales conference of the Heidelberg organization held in New York, N. Y. Others in attendance at the meeting were Charles Pope, Exec. Vice Pres., Heidelberg Eastern, Inc.; Hubert H. A. Sternberg, Chairman of the Board, Schnellpressenfabrik AG, Heidelberg, Germany; W. P. Lauffs, Co-owner, Heidelberg Western Sales Co.; and C. W. Sternberg, Head of Heidelberg Southern Sales Co.

The ABC of OFFSET

For Letterpress Printers

Series Two

By George Jos. Lenzer

XIX—CORRECTING THE HALFTONE POSITIVE

INTENSIFICATION — Problems posed by the chemistry of intensification are quite different from those encountered in chemical reduction. There are many explanations and theories extant covering the subject of intensificatant, with several in distinct disagreement as to what actually happens during the operation. Some writers state that the silver grains making up the image are replaced by some other metal or metallic salt. Then in further explanation, the same writers state that by treating the intensified image with hypo, the image will be restored to its original silver. This is a definite contradiction of fact. It is almost like the idea of the alchemists of old who tried to change lead into gold.

Intensification is not a matter of replacing the silver halides with some other metal, but rather a deposition or chemical plating of the silver with some other metal, such as mercury, chromium or additional silver.

It must be remembered that before intensification can be accomplished, some silver must be present in the image. A ghost dot in a halftone positive cannot be intensified unless some silver is present, no matter how little. Ionization and electrolisis makes it possible for intensification to take place.

To better understand what occurs by intensification, let's try an illustrative experiment, and make a silver penny.

Copper or bronze has a strong affinity for certain metals and is antagonistic to others. In some instances copper will act as a flux or binder making possible the coating a base metal of one kind with a metal of another kind such as iron being plated with silver, nickel or gold, by first plating the iron with copper.

Let's take a bright new cent, or if an old one, dip it in acetic acid until it is clean and free of grease. We will next dip it in a mercuric intensifying solution. after the penny has changed color rinse it in water for a few minutes, then dip it in an iodine-iodide-cyanide reducing bath in which films or plates have been reduced. Rinse the penny again in water then dry with a clean cloth. Presto! A silver penny.

The plating on the penny has no permanence and will soon oxidize and disappear. The experiment will serve, however, to illustrate what does happen when we intensify a halftone dot. The mercury itself will intensify the dot or will serve as the binder for the deposition of more silver when silver nitrate is incorporated with the blackening solution or agent.

Chemicals

Probably the most efficient and generally used intensifier is mercury which in most writings is mistakenly called a bleach, because it turns blackened silver white. Because mercury is the basis for intensification we will use it to head our list of intensifying chemicals:

Intensifying Chemicals:

Mercuric chloride	Potas. Bromide
Ammonia 28%	Pot. or Sod. cyanide
Copper sulphate (blue vitriol)	Potas. bicromate
Elon	Silver nitrate
Hydrochloric acid	Sod. sulphite
Hydrochinon	Sod. thiosulphate (hypo)
Nitric acid	

Formulas:

Whitening or Bleaching Solution:

Mercuric chloride	¾ oz.
Potassium bromide	¾ oz.
Water to make	32 oz.

Treat the plate or film in the above solution until the image is whitened through to the back of the film or plate. Wash thoroughly under running water for about 5 min. then blacken the image in one of the succeeding solutions. The formulas in the order given will provide progressively greater densities in the image.

(A) 10% solution of sodium sulphite.

(B)

Water (125 deg. F.)	24 oz.
Sodium sulphite (anhydrous)	¾ oz.
Hydrochinon	¾ oz.
Potassium bromide	¾ oz.
Water to make	32 oz.

(C) 10% solution of ammonia (28%).

(D)

Potassium cyanide	½ oz.
Silver nitrate	¾ oz.
Water to make	32 oz.

The silver nitrate and the cyanide should be dissolved separately in about half the volume of water, then add the former to the latter until a permanent precipitate results. Let the mixture stand for about ¼ hr. and then filter. It is ready for use after being filtered.

(E) Copper-Silver Intensifier:

Stock Sol. (A), Whitener or Bleach):

Copper sulphate (blue vitriol)	365 gr.
Potassium bromide	365 gr.
Water to make	32 oz.

Acidify with from 10 to 20 drops of nitric acid.

Stock Sol. (B), (blackener):

Silver nitrate	1¾ oz.
Water to make	32 oz.

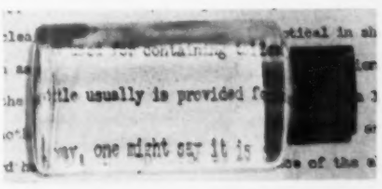
Add 1 or 2 drops of nitric acid.

Before intensifying is begun the plate or film must be washed thoroughly. The image is treated in Solution (A) until it turns white after which it is given a rapid and thorough rinse. It is then blackened in Solution (B). Rinse well and dry. If greater intensification is desired, this procedure may be repeated.

(F) Chromium Intensifier, Eastman Formula (In-4):

Potassium bichromate	3 oz.
Hydrochloric acid	2 fl. oz.
Water to make	32 oz.

Mix one part of stock solution with 10 parts water. Bleach plate or film in this solution thoroughly, then wash for 5 min. or until the stain disappears. Re-develop fully by daylight or diffused artificial light in any non-staining, quick acting



Printer's Magnifying Glass—Cleveland Printer David Reisz, suggest that a magnifier may be furnished quickly by a printer by the simple expedient of filling a certain type of bottle with water. The magnifying bottle is intended only to enable the operator or compositor to magnify some indistinct letter or the like in copy which has not been too well prepared. It may also be used for the purpose of identifying indistinct type characters and/or figures in proofs.

The clear glass bottle required is elliptical in shape with one side flatted such as are used for containing toilet preparations. The flatted off portion of the bottle usually is provided for affixing a label. Describing the bottle in another way, one might say it is shaped like an ellipse through which a chord has been drawn, the smaller curved surface of the ellipse having been removed.

To use the magnifier, the bottle is laid down upon copy or proof, either with plastic cap at the top or one side of the center. In the instance of the accompanying illustration, the bottle is of 2 oz. size. But any size bottle with flatted-off side may be used.

Under sufficient light, the water-filled lens concentrates the light rays considerably to cause characters to be well illuminated. This home-made device is not a corrected lens by any means, but it does furnish magnification with some distortion which does not interfere with legibility.

An Invitation To Our Readers

The Editor of *Printing Equipment Engineer* is again extending an invitation to executive readers to send in descriptions and/or information about devices which have been developed in their plants. These may consist of work simplification, time-saving, or trouble-eliminating items.

Just write informally in a letter and send a photograph or rough sketch of the device or devices. We'll attend to the rest.

In turn, other executive readers will appreciate your generosity in passing along ideas which will be helpful to them. From time to time we have printed a considerable number of articles about devices which have been helpful in many ways to executives like yourself.

MacD. Sinclair, Editor,
1276 West Third St.,
Cleveland 13, Ohio.

developer such as the elon-hydrochinon (Eastman D-72) diluted 1:3. Wash thoroughly and dry.

Developers containing high percentage of sulphite should be avoided. High concentration of sulphite prevents maximum intensification. For greater intensification this process may be repeated. By varying development time, the degree of intensification can be controlled.

All negatives or positives should be hardened sufficiently before intensification because this formula has a softening action on the gelatine emulsion.

Why Intensify?

Where, by reduction, the halftone dot is rendered smaller or weaker, intensification renders the dot blacker and can frequently make the dot larger.

Accidents do happen during photographic processing and corrective procedures. Positives coming from the camera department may have gray or translucent halftone dots in the image. Or, by reduction some dots may have been rendered gray or weak. It is also possible that a true color balance of tonal value does not exist in the image. No matter what the reason may be, so long as some silver is present Intensification may be the corrective answer to the problem.

Each intensifier possesses specific qualities and advantages, but by the same token some have definite disadvantages. Example: the formulas (A) and (D) when used in combination are better known as Monckhoven's intensifier. This combination is ideal for the intensification of strong shadow areas in a positive or the dense highlight areas of a negative.

Its disadvantage lies in the fact that while the dense or heavy areas are being intensified, the smallest highlight or shadow dots are being reduced even to elimination.

Repetition can be boring but is often necessary. It must be remembered that with a continuous tone negative or positive intensification will be general and overall in action but with the halftone image intensification can be said to be localized among the individual dots. Hence, the importance of knowing what intensifier to use and the purpose to be served.

Procedures

Procedures for intensification are the same or similar to the procedures employed in correcting the halftone negative, *i.e.*, staging, crayoning, masking, etc. The only difference being in the chemicals used.

Because the halftone positive undergoes the same kind of processing in the camera department as that provided for production of halftone negatives, it is imperative that the positives be consistently handled with the same care and caution. This means a high regard for cleanliness, good housekeeping and generous use of fresh water in washing positives.

It is equally important that all chemicals used should be fresh and truly active at all times. The more the chemicals are used the more they become contaminated and the less active they become. Strongly contaminated chemicals will fail to afford the functional results for which they were compounded.

Excessive contamination of some chemical compounds may so alter the solution that while in the state of contamination they may be used for other purposes. For example; a cyanide-iodine-iodide reducing bath which has become highly contaminated with silver salts, can frequently be used as a blackening agent when intensifying with mercury solution. The silver contained in the solution will be deposited upon the mercury whitened silver image of the negative or positive.

About The Tools

In Chap. XVII of the ABC of Offset, mention was made of wooden sticks as being tools of the modern school of color correction or dot etching. This raised a question as to its use and application compared to the use of chinese brushes. Since explanation is in order, here is a good place to start.

Fear is a powerful enemy of progress. Because grandpa rang a bell by pulling a rope, many of us feel that that's the only way. We are afraid to ring the bell by striking it with a hammer, so we continue to pull the rope.

So too with tools of the trade. Because Joe Doakes learned to use Chinese brushes during the wet plate days, Chinese brushes must be used today with our modern materials.

When compared to the chalky coatings of the wet plates we find today's dry plate emulsions to be tanned, tough and hardened skins of gelatine. If, during all camera operations, the films and plates are properly processed, there need be no fear in handling these newer films and plates. We must, however, exercise care and caution. A light, deft touch must be developed. This, to compensate for the softness of the brush.

It seems to be a natural thing for man to bear down as with a pencil while writing, or to gouge and add weight to a tool because it has an unyielding point. Chemical correction is not effected by the weight of the tool or the applied pressure but rather by the action of the chemical solution.

So, let's consider the etching sticks or pieces of wood.

They are 6 in. lengths of ¼ in. dowel sticks, sharpened and pointed in a pencil sharpening machine on both ends. Being hardwoods, dowels are best suited for the purpose.

For getting down to fine detail, the one pointed end of the stick is used much like a pen for the application of the chemical. The other pointed end of the stick is used for larger and more general etching or reduction and intensifying. This is made possible by wrapping the end with cotton batting. There is no limitation as to how much or how little an amount of cotton should be used. Reason and common sense will determine the size of the cotton wad necessary for the purpose to be served.

Broader areas may be treated during the operations if the chemicals are applied via the long side of the point on the etching stick.

Prolonged subjection to the action of water and chemicals will tend to break down the wood fibers of the stick's pointed ends, thus rendering the points as soft and pliable as a brush. When the points become so frayed as to be incapable of doing fine detail work, it is only necessary to replace the stick with another with a new point. After the frayed stick has dried out thoroughly it need only be pointed in the pencil sharpener and it is ready for use again.

Discarded brush handles (hardwood, artist's type) may also be used to the same end and purpose after the metal has been removed. Honestly, these little used or little known tools are the most efficient and economical tools in the industry. It remains only to have the courage, guts and nerve to use them without fear, that they will prove their worth to the workman and to the employer.

(*To Be Continued*)

References

All formulas given in this series are in common usage and have been published in the following and other periodicals and publications for benefit of the industry.

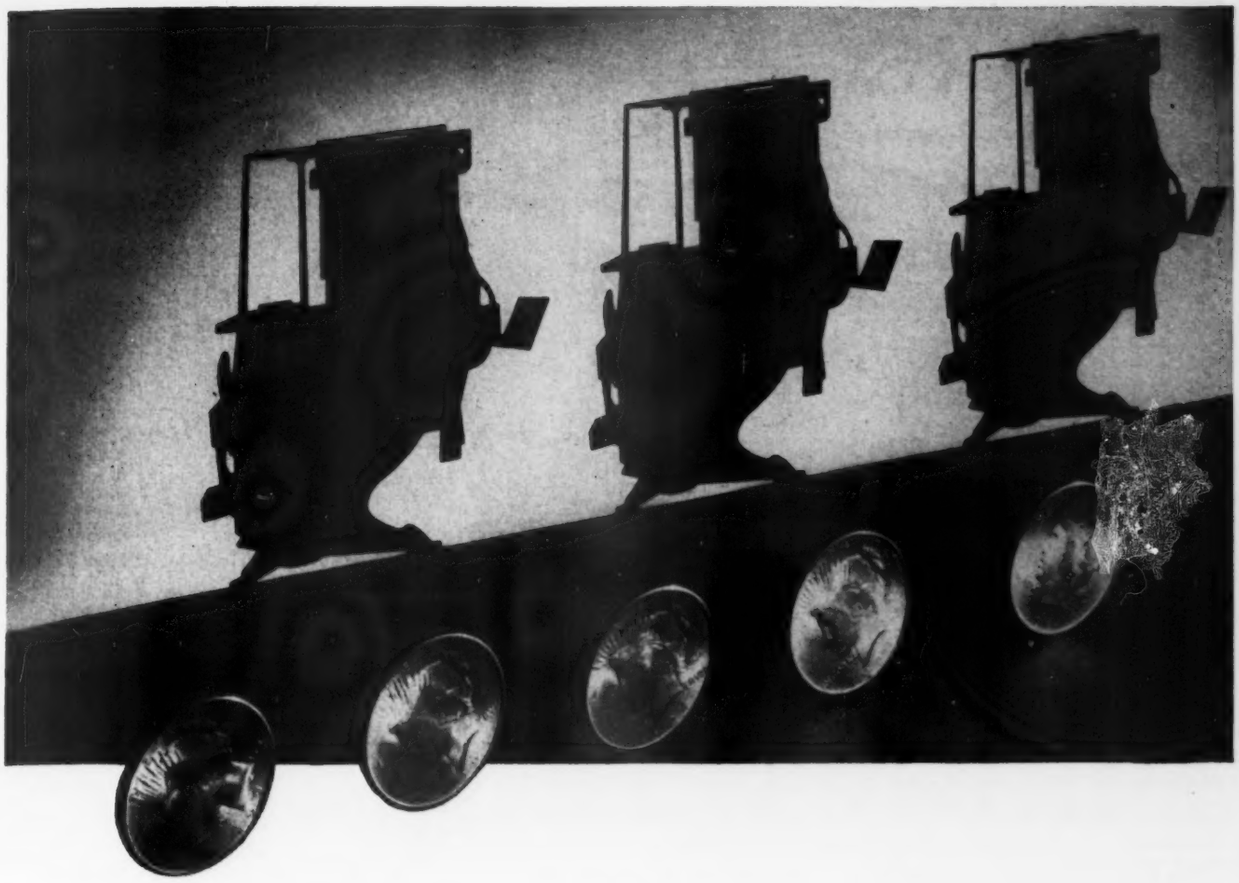
Elementary Photographic Chemistry. (Eastman Kodak Co., Rochester, N. Y.) 1936.

Materials and Technique For Photomechanical Processes. (The Gevaert Co. of America, Inc.) 1939.

Lithographic Technical Bulletins. (Lithographic Technical Foundation, Inc., N. Y.) 1945.

British Journal Almanac. (London, England) 1930.

Intensification and Reduction. E. J. Wall. (American Photographic Pub. Co., Boston, Mass.) 1927.



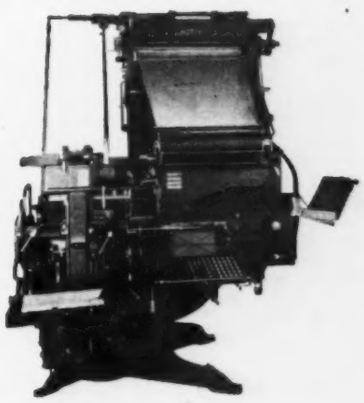
How to save money in Ad Alley!

Modern Wide Range Linotype Mixers save you money on all your display composition by cutting make-up and floor time.

Here's why: With them you quickly cast *mixed* lines with ease, and also *keyboard* the larger sizes you need for heads and display.

With these Linotype Mixers you get a bigger dollar's worth . . . they give you the easiest, fastest magazine shifting; the greatest safety, the most dependable distribution and simplified maintenance.

Modernize with Wide Range Linotype Mixers and save! Your Linotype Production Engineer will be glad to give you all the money-saving features of the modern Wide Range Mixers.



The Model 35's wide, 90-channel magazines give you 18 extra channels for big display characters from normal 24 pt. to 36-pt. condensed. *No other mixer* has this main magazine range. Model 36 gives you the auxiliary range needed for sizes up to 60-pt. condensed.

Set in Linotype Spartan and Primer families

MERGENTHALER

• LINOTYPE •

LINOTYPE COMPANY

29 Ryerson Street, Brooklyn 5, N.Y.

Agencies: New York, Boston, Chicago, Dallas, Atlanta, Cleveland, San Francisco, Los Angeles. In Canada: Canadian Linotype, Limited, Toronto, Ontario

BOOKS

Thoroughly modern and artistic is the volume *Specimens*, published by the Stevens-Nelson Paper Corp. Fine printing and art papers, together with designs by well known typographers resulted in a de luxe book pregnant with ideas.

Catalog of Fine Paper Specimens and Fine Printing

THE work of approx. 200 organizations and individuals in 10 countries, including American printers, have gone into production of the book called *Specimens*, a catalog of some of the finest printing and art papers in the world. The book is the result of three years' work by the Stevens-Nelson Paper Corp., 109 E. 31st St., New York 16, N. Y. Over 100 designs by leading American and European artists have been carried out on an equal number of paper specimens by almost every printing process. Letterpress, offset, gravure, photostone lithography, collotype, silk screen, engraving, embossing and both blind and foil stamping are represented among the reproduction processes.

The paper specimens in the book were made either by hand or by hand in conjunction with the mould machine. Among its pages are designs executed by such familiar American typographers and printers as Goudy, Rudge, Marchbanks, Gilliss, Updike, Rogers, Cleland, Dwiggins and Teague.

On the back of each specimen are the credits for the design and printing. The printing process used is also included, as well as the full nomenclature of the stock. In addition, other processes to which the paper may be adapted are given.

This beautiful and unusual book is intended to convey to the viewer the very best results which can be achieved in printing. The high quality of talent and material connected with the production of the book make an inspirational and enduring source of ideas.

Specimens is not for sale although, it was stated, offers of up to $100 per copy have been received. The complete edition comprises 5000 copies which are to be given individuals and organizations who have been nominated by the American printers who took part in making it or by the paper merchants throughout the United States and Canada who distribute Stevens-Nelson papers. Each book is calligraphically inscribed with the recipient's name.

This unusual hardbound volume is covered in Nigerian goatskin with marble or handblocked paper sides in slide case. It consists of 107 leaves, plus inter-leavings and fly-leaves. The book measures 10 in. by 12 in. and is approx. 1 5/16 in. thick.

Management of Printing Production

LIBRARY shelves in the past few years have taken on a number of how-to-do-it books of all descriptions as aids to those in industry seeking improved, faster and more economical methods of operation. Recently introduced is another impressive looking text for these same shelves but with entirely different content.

Its title *Management of Printing Production* might convey, at first glance, the thought that here is another "cook book" on printing. Such an objective was the furthermost thought in its preparation by the author, Prof. Robert H. Roy, Dean of Engineering, Johns Hopkins University, Baltimore. Prof. Roy explains that the underlying objective in writing the book was to develop sound principles of production management for the printer and lithographer. It contains no formulae the application of which will insure sound production management. Every production manager must work out his own salvation from the context in the book.

The 340 pages and more than 200 illustrations make up one of the text books in a series being presented to the printing industry by Printing Industry of America, Inc. Prof. Roy's background for writing such a book includes over 25 years spent as a printing engineer in the Graphic Arts.

Based on actual studies, *Management of Printing Production* contains advanced methods, procedures and principles of production techniques used in the more progressive plants in the country. It covers a good range of the various aspects of production. One of the most interesting parts is that on Techniques of Production Management. In this group are chapters on estimating, production forecasting, production control, routing and planning, scheduling, dispatching, records, quality control, purchasing, stores and stock, and materials handling.

Supporting activities are found in another part and discussed under such headings as plant location and equipment layout, personnel management (employment practices, training, grievances, wages, etc.), industrial engineering time study, and equipment policies. The introductory chapters in the book concern specialization, standardization and organization.

Management of Printing Production—by Prof. Robert H. Roy. Book consists of 340 pages; over 200 illustrations; measures 8½ in. by 11 in.; case bound blue cover with gold stamped lettering. May be ordered from Printing Industry of America, 719 Fifteenth St., N. W., Washington 5, D. C. Price: $35 for initial copy; $15 each for additional copies.

RS-3 Gone To Press

THE Research and Engineering Council of the Graphic Arts Industry, Inc., issued this month its RS-3 publication supplement, which lists non-confidential research or engineering projects in the state of development. Individuals or companies were solicited for information. A project may not be listed as completed unless it has appeared, as a working project, in a previous edition of this publication or one of its supplements. The Council tries to issue supplements every six months.

1954 Self-Advertising Contest

The success of the first two PIA Printer's and Lithographer's Self-Advertising Exhibition and Awards contests has prompted the sponsors to hold another one in 1954. Brochures of rules are now available and can be obtained either from Printing Industry of America, Inc. national and local offices or from Miller Printing Machinery Co., 1117 Reedsdale St., Pittsburgh 33, Pa., sponsors of the contests. Rules are substantially the same as for the first two contests, and material produced between Sept. 11, 1953, and Oct. 22, 1954, will be eligible. The 1954 contest will close on Oct. 22, and all entries must be mailed on or before that date. Awards again will be $1 thousand and a Benjamin Franklin statuette for first prize for campaigns in each of the three size classifications, and a statuette for second place in the campaign competitions and first place in the individual specimens competitions. The exhibit will be held in the Hotel Statler, Detroit, during the PIA annual convention, November 15-19.

GPO Reduces Charges

The U. S. Government Printing Office, Washington, D. C., has announced that for the first time in 20 years it has reduced its charges for printing to other government agencies. Public Printer Raymond Blattenberger has advised that GPO prices would be reduced 5% effective Feb. 1. Blattenberger stated: "I am looking forward to the day when every government agency will have its printing done at the GPO, not because it is required to do so by law, but because the GPO renders the type of service the agency wants."

SLUG CONTROL

Many plants struggle with the effort to obtain correct slug trim, but forget the controlling essentials. For instance:

THE BACK AND SIDE KNIVES

Must be kept sharp at proper angles and never below allowable minimum height.

THE MOLDS

Badly warped molds will make accurate trim impossible. Rounded edges will cause "feathers" on slugs and cause trouble on press.

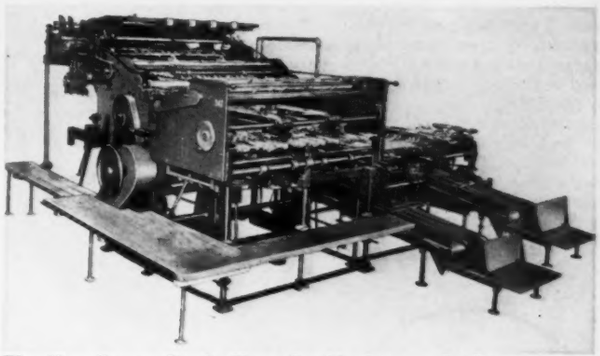
These are only the most common causes of high make-ready costs in job and book printing plants. There are other related factors, such as warped disks and mouthpieces, worn mold disk locking studs and blocks, and worn mold banking blocks.

If you have not had your knives and molds checked recently, we will be happy to inspect and report to you on them. We can regrind them or supply new ones as needed. These are the parts which require the greatest precision, and if you do not already know it, you will find that the Star trademark represents the ultimate in precision manufacture.

PRECISION
TRADE ★ MARK

LINOTYPE PARTS COMPANY
INCORPORATED
Factory and Main Office
SOUTH HACKENSACK, N. J.
Branch Office: 1327 BROADWAY, KANSAS CITY 6, MO.
CHICAGO · MINNEAPOLIS · DENVER · LOS ANGELES · BOSTON
CANADA: SEARS LTD.

Speed up the folding of your publication and book work



The New Dexter Single Sheet Double Sixteen Folder

Covering just about the entire range of magazine and book work, and handling sheets of maximum size 44 x 58", minimum 25 x 36", this new Dexter machine produces 16 and 32 page signatures of page sizes from 11 x 14½" to as small as 6¼ x 9".

Recommended speed is 4,500 cycles per hour. Actual production will depend on kind of paper and quality of work desired.

	Page size *Three right angle folds*	
At each cycle the machine delivers two 16 page signatures or one 32 page signature made up of inserted 16's.	Maximum 11 x 14½"	Minimum 6¼ x 9"

These signatures are the same impositions as the old type Dexter Double Sixteen.

	Two right angle folds with third fold parallel to second fold	
This signature also is the same imposition as the old type Dexter Double Sixteen equipped with parallel 16 attachment.	7¼ x 22"	4½ x 12½"

Using perforator provided, two-up signatures may be torn apart to yield final page sizes from 7¼ x 11" maximum to 4½ x 6¼" minimum.

Equipment includes slitter, perforator, headers-up, Cross combing feeder, stacker deliveries and motorized variable speed drive.

Dexter Folder Company
General Sales Offices
330 West 42nd Street, New York 36, N. Y.
Boston, Philadelphia, Washington, Cleveland, Chicago, St. Louis
Agents in principal foreign countries

NEWS ITEMS

New Type face in *Esquire* — Fairfield Medium, a type dress manufactured by Mergenthaler Linotype Co., is now being used in *Esquire* magazine. It first appeared in the holiday issue (Jan. 1954), and was selected by Gus Berkes, Production Director and Vice Pres., in consultation with the magazine's art directors. Fairfield Medium is said to be adapted to reproduction on all paper stocks by any method. It has been utilized both for letterpress and gravure in 9 pt. on 10 and 8 pt. on 9.

Appointed by Intertype Corporation — J. Francis Gorski, Assistant to the President of Intertype Corporation, has been elected Secretary of the Corporation effective Jan. 1, it has been announced by President Harry G. Willnus. Gorski succeeds Frank Hoffman, who continues as Vice Pres. in charge of Export Sales. Since his release from the United States Navy as a Lt. Comdr., Gorski has served as Assistant to the President. He is a member of the New York State Bar, and is a graduate of St. John's University, where he received the LLB and LLM degrees.

Gene Waterloo, Technical and Sales Consultant for General Plate Makers Supply Co., is spending four weeks in Tokyo, directing, installing and organizing a new photoengraving plant. Accompanied by his wife, Mr. Waterloo left for Japan by plane, early in January. Waterloo is readying this new Japanese plant for complete photoengraving service, including four-color process work.

WIRTH

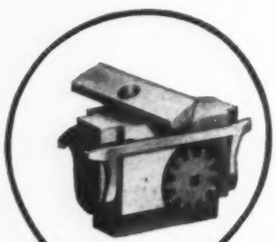
George Wirth has been appointed Sales Representative in the Southern District for J. M. Huber Corp.'s Ink Div., it has been announced by Louis A. Lara, Gen. Sales Mgr. Wirth will work under the direction of E. Guy Myover, Southern District Sales Mgr., in St. Louis. His territory will include southern Illinois and sections of Indiana and Missouri. A native of Keyport, N. J., Wirth was previously associated with the New Jersey Bell Telephone Co. He joined Huber in 1953 and, after completing the company training program, was assigned to Southern Sales.

Sun Chemical Corp. has announced the formation of General Printing Ink Co. (Midwest Div.) and the appointment of Harold A. Kernell as its General Mgr. According to Sun President Ralph C. Persons, the newly formed division will also include American Printing Ink Co., Chemical Color & Supply Co., Eagle Printing Ink Co., Fuchs & Lang Mfg. Co., E. J. Kelly Co. and Sigmund Ullman Co. It is planned to retain divisional labels on products as well as divisional formulas. Other officials of the General Printing Ink Co. are as follows: Gordon McQuaker, Asst. General Mgr.; Weldon R. Coate, Vice Pres., and Bern A. Ormsby, Vice Pres.

BANKS

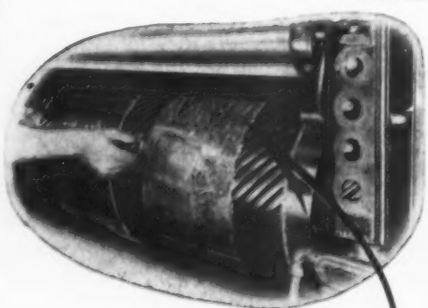
David D. Banks Joins Robertson — Executives of Robertson Photo-mechanix, Inc., Chicago, announce that David D. Banks has joined that firm as Eastern District Sales Mgr. Banks, who has had more than 22 years' experience in the Graphic Arts industry both as a craftsman and in equipment sales. He will work with the Robertson dealer organization in the eastern section of the country, with headquarters in New York.

Fairchild Camera and Instrument Corp. of Canada, Ltd., has been organized by its parents, Fairchild Camera & Instrument Corp., Syosset, N. Y., according to an announcement by Pres. John H. Clough. The Canadian subsidiary has established headquarters in the Toronto Type Foundry Bldg., 120 Wellington St., W., Toronto, Ont. Said Clough, "The establishment of a Canadian subsidiary follows four years' experience in leasing the Scan-a-Graver to Canadian newspapers, printers and commercial suppliers. Fairchild will maintain a stock of supplies in Canada."



the hook's the thing!

The hook *is* the thing—the heart of the PMC Warnock Plate Mounting System for all rotary letterpresses. It is safe, speedy, accurate and dependable. Safe because the hook locks *automatically* in the cylinder groove when inserted and can't fly out to damage plates or press. Speedy because hooks can be moved rapidly in cylinder grooves. Accurate because the hooks can be moved minute distances for close register adjustment. Dependable because sound engineering and careful manufacturing control make both hooks and cylinders precision mechanisms of proven efficiency.



Write today for our folder "The Hook's The Thing."

THE PRINTING MACHINERY COMPANY

436 Commercial Square
Cincinnati 2, Ohio

I. Tornberg, Vice Pres. and Sales Mgr. of Wood Newspaper Machinery Corp., Plainfield, N. J., and Mrs. Tornberg, left Dec. 29 for an air-boat vacation to South America. They spent the holidays in Miami, Fla., leaving there by plane for Caracas, Rio de Janeiro, Sao Paulo, Montevideo, Buenos Aires and Santiago and other East Coast ports of call. The second part of their trip by air and boat up the West Coast will include stops at principal cities. Tornberg plans to visit many friends in the newspaper printing industry in South America prior to his return in mid-March.

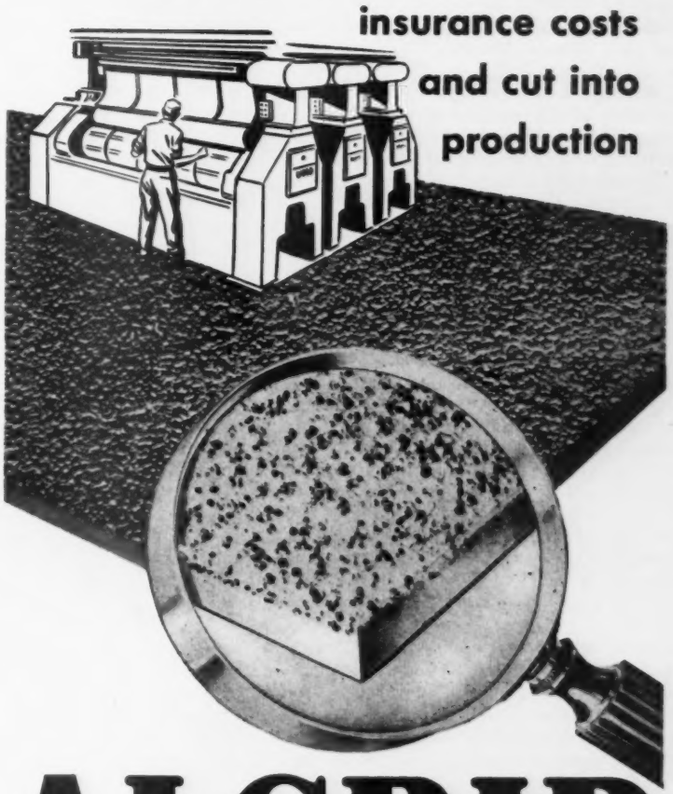
Dr. Roger Adams, chemist and educator, has accepted an appointment to the Board of Trustees of Battelle Institute, Columbus, O. Dr. Adams, head of the University of Illinois Dept. of Chemistry and Chemical Engineering since 1926, has done research on stereochemistry and natural products. He has been granted honorary doctorates from Harvard University, the University of Pennsylvania, Polytechnical Institute of Brooklyn, Northwestern University, the University of Rochester, and Yale University. The platinum oxide catalyst which Dr. Adams developed is generally known as the Adams catalyst. Among his other important contributions to chemistry are improved local anesthetics and quinone diimides. For helping mobilize American chemical research for the Armed Forces during World War II, he received the Presidential Medal for Merit and was appointed Commander of the Civil Division of the Most excellent Order of the British Empire (CBE). His pioneering work in chemistry brought Dr. Adams many awards. He is a former president and chairman of the board of directors of the American Chemical Society, an honorary fellow in similar national chemical societies in five European countries, and also is editor-in-chief of *Organic Reactions*. Dr. Adams, a former president of the American Association for the Advancement of Science, is a member of the American Academy of Arts and Sciences, the National Academy of Sciences, the American Philosophical Society, and the Society of the Chemical Industry. He is a native of Boston, received his A.B., A.M., and PhD. in chemistry from Harvard University. He has studied additionally abroad. Battelle's Columbus, O., staff of more than 2100 is currently conducting more than $13,000,000 worth of research annually for industry and government.

Fishel Succeeds Vail—E. J. (Eddie) Vail, California representative, has retired from active association with Lanston Monotype Machine Co. after about 30 years service. Jack Fishel (no relation to Monotype's recent Harvey Fishel) has succeeded Vail. Fishel came to his new territory from Monotype's Chicago office. He will reside at 1747 ¼ N. Kingsley Dr., Hollywood 27, Calif. Vail is well known in the Ohio-W. Va.-Ky. area where he traveled for Lanston Monotype Machine Co. for 23 years, the last seven years having been spent in California territory. Vail's home address is 2344 W. Barton Lane, Montrose, Calif.

James Beckett has been elected executive vice president of Interchemical Corporation. Charles W. Scott will succeed him as divisional president of Interchemical's Finishes Div. Beckett joined Interchemical in 1929 as manager of its Chicago printing ink factory. Scott has been with Interchemical since 1940.

(*Continued on Page 69*)

Slipping accidents skyrocket insurance costs and cut into production



ALGRIP

Gives true foot safety...and pays for itself

Pressroom floors slicked with ink mist are an invitation to tragedy—in shattered morale, in crippling accidents, in costly insurance rates.

Plants throughout the country have already solved this accident-and-insurance problem with ALGRIP Abrasive Rolled Steel Floor Plate. For ALGRIP, installed wherever footing is unsure, stays non-slip under all conditions—even on steep inclines!

Hundreds of tiny abrasive particles impregnated *to a controlled depth of penetration* into each square foot of ALGRIP's tough, lightweight steel plate give it a rugged "grinding-wheel" grain surface that takes a firm grip at every footstep. And ALGRIP never becomes smooth because hard wear only exposes new abrasive particles. It's Underwriters' Laboratories approved for safety.

ALGRIP foot safety pays for itself in savings on insurance premiums. Mail this handy coupon today for full details on how ALGRIP can cut costs for you. There's no obligation.

A.W. ALGRIP
Abrasive Rolled Steel Floor Plate

ALAN WOOD STEEL CO. ESTABLISHED A.W. 1826 CONSHOHOCKEN, PA.

UL

ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send Booklet AL-30 on cutting costs with ALGRIP.

Name_____ Title_____

Address_____

City_____ Zone_____ State_____

Wettability of Metals

Recently, a reader wrote to Axel Lundbye, Research Engineer, Kable Printing Co., Mount Morris, Ill., inquiring about wettability of different metals with regard to water and oil. The question arose as the result of an article on offset printing authored by Lundbye in a recent issue of *Printing Equipment Engineer*. The following is Lundbye's reply:

Your letter to the editor of *Printing Equipment Engineer* relative to one of my articles about offset printing and especially wettability of different metals with regard to water and oil, has been referred to me. As you undoubtedly know, this is one of the debatable questions where the experts always disagree.

An engineering handbook, published in Germany (Hutte) contained a list of the wettabilities of different materials with water and oil. You must understand there are few, if any, research people who make positive statements without reservations and this holds true also in regard to the wettability of metals. A considerable amount of work has been done, but no one has as yet come out with a positive statement. It is always stated: "It looks like it is so."

One thing must be kept in mind regarding wettability—it can be changed easily by altering the chemical composition of the fountain solution, which will change the wettability of the metals; or the chemical can be changed in the composition of the ink. However, it should also be kept in mind that most bi- and tri-metallic lithographers use chromium or chromium alloy for the non-printing area and all-copper alloy for the printing area. Therefore, we could, without resorting to theory, draw the reasonable conclusion that the basis for this choice must have been proved by performance.

There could be, of course, two reasons for this:

(1). The metal could possess surface characteristics.

(2). By changing the properties of the film of the phosphate or gum arabic deposited on the surface of the metal doing the printing, the results could be such that a hydrophobic film exists on the copper or the copper alloy, and a hydrophilic film exists on the chromium or the chromium alloy.

It is well known that many laboratories have made tests on offset plates. In the accompanying table are indicated wettabilities of different metals by different solutions.

In the table it is indicated that the fountain solutions have considerable to do with wettability by water and/or oil. For more information, I would like to recommend that you get from the library a book entitled *Surface Activity* by Moilliet & Collie, (a D. V. Nostrand, Inc., publication) and also a book entitled *Colloidal Dispersions* by Fischer (published by Wiley).

Metal	Phosphoric Acid Fountain Solutions	Ammonium Dichromate Solutions
Chrome	wet by water	wet by water
Lead	wet by water	wet by water
Silver	scummed	wet by water
Nickel	scummed	wet by water
Zinc	wet by ink	wet by water
Copper	wet by ink	wet by water

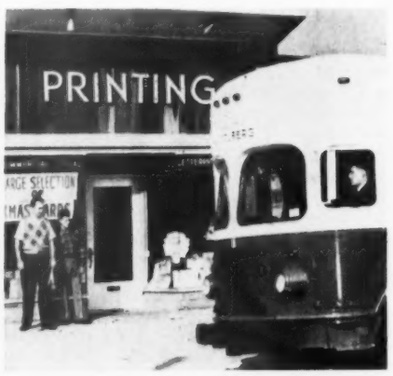
TAGA Program

Papers on technical problems in the Graphic Arts are now being assembled and reviewed by the Technical Association of the Graphic Arts for its sixth annual meeting on May 10 and 11. To be held in the Schroeder Hotel, Milwaukee, the two days of technical sessions will be devoted entirely to technological problems faced by the printing industry. Covering a wide range of interests in the Graphic Arts, TAGA will present a program covering both private and cooperative research on printing problems. TAGA now has members in Denmark, Sweden, Holland, England, Australia, and Canada. Further details concerning the meeting can be obtained from Richard Shaffer, Pratt Institute, Brooklyn, N. Y., President of TAGA, or from George Hammer, Forbes Lithograph Mfg. Co., Boston, Mass., its Secretary-Treasurer.

Five employees of the Paper Manufacturing Co., Philadelphia Pa., recently joined the company's Quarter Century Club at its 10th annual banquet. They include Dennis Coll, Harry Flynn, Howard Frymeyer, James V. Peoples and Francis Trimbur. The Club's total active membership is now 25. Seven members are retired, 10 are deceased. Frank and Louis O'Neill, President and Vice Pres., respectively, and Frank Coar, Treasurer of the company, spoke at the banquet.

Rosback Installations

Recent installations of Rosback bindery equipment announced by F. P. Rosback Co. are as follows: *Auto-Stitchers*—Hamilton Printing Co., Hartford, Conn. (installed by Merit Printers Supply Co.); William L. Erickson & Co., Chicago (installed by American Type Founders); Geo. M. Melin Printing Craftsman, Chicago (installed by American Type Founders); Lander Bookbindery Corp., St. Louis (installed by Harris-Seybold Co.); Adams Printing Co., Gardner, Mass. (installed by Wild & Stevens, Inc.); Dept. of Purchasing, Detroit (installed by Kalamazoo Printing Machinery Co.); Motschall Co., Detroit (installed by Tompkins Printing Equipment Co.); Bigger Press, New York, N. Y. (installed by Zimmer Printers Supply Co.); Paramount Printing Co., Toledo, O. (installed by American Type Founders); Mansfield Printing Co., Mansfield, O. (installed by American Type Founders); The Catholic Sentinel, Portland, Ore. (installed by Harry S. Hill Co.); Oxford Bindery, Philadelphia (installed by E. P. Lawson Co., Inc.); Printcraft Card Co., Scranton, Pa. (installed by American Type Founders); and Holt Printing Co., Grand Forks, S. D. (installed by Perfection Type, Inc.). *"Twenty-two Special" Perforators*—Title Insurance & Trust Co., Los Angeles (installed by Addressograph-Multigraph Corp.); Tunica (Miss.) *Times Democrat* (installed by Western Newspaper Union); Salesman Sam, the Printer, Laurel, Miss. (installed by American Type Founders); Continental Mailing & Folding, New York, N. Y. (installed by Harris-Seybold Co.); Specialized Printed Forms, Caledonia, N. Y. (installed by Buffalo Printers Supply Co.); American Euka Corp., North Carolina (installed by Addressograph-Multigraph Corp.); B. M. Printing Co., Cincinnati, O. (installed by The Nessler & Wagner Co.); John F. Erwin Printing Co., Cushing, Okla. (installed by Western Newspaper Union); and Volunteer Press, Athens, Ga. (installed by Western Newspaper Union). *Pony Vari-Speed Perforators* — Kurt H. Volk, Inc., Bridgeport, Conn. (installed by E. P. Lawson Co., Inc.); and Thomas-Marrow Printing Co., Fort Worth, Tex. (installed by Western Newspaper Supply). *Slot Rotary Perforator*—Uarco, Inc. Deep River, Conn. (installed by American Type Founders). *Super XX Perforator*—International Business Machine Corp., Washington, D. C. (installed by E. P. Lawson Co., Inc.). *Gang Stitcher*—Cayuga Press, Ithaca, N. Y. (installed by American Type Founders). *Special Six Punching Machine*—The Willam Feather Co., Cleveland (installed by Caxton Printers Supply Co.).



Heidelberg Demonstration Trucks — Two demonstration trucks were added recently by Heidelberg Eastern Sales Co. to bring to 22 the total of similar vehicles used to demonstrate Heidelberg automatic platen presses around the country. One of these trucks is shown above in front of the firm of Quick-Set Printers, Lynbrook, Long Island, N. Y. From left to right in front of the establishment is Walter McCarthy and Walter Hartman, partners in the company. In the cab of the vehicle is James Flanagan, driver-demonstrator for Heidelberg.

Chase away

TYPE METAL HEADACHES

WITH

Imperial's

FREE ANALYSIS SERVICE

We'll gladly send one of our envelopes for mailing to us a sample of your working supply of type metal for analysis.

With the report of our findings we will send our Plus Plan suggestions for keeping your type metal up to casting efficiency.

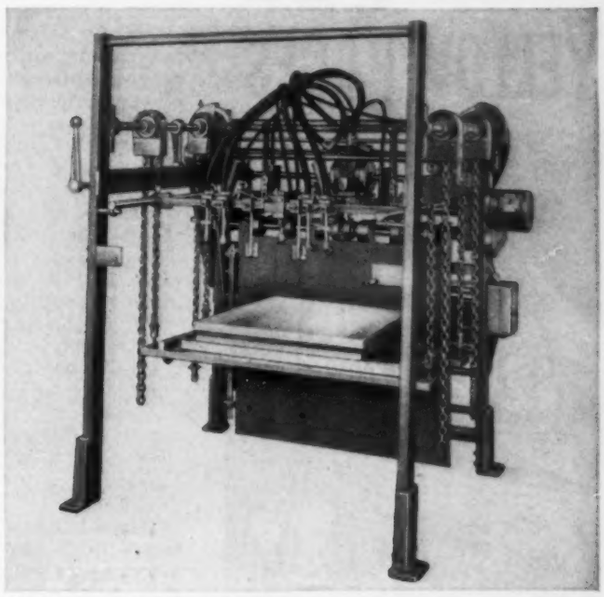
Imperial

TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

Dexter Continuous Reloading Metal Sheet Feeding Eliminates Loading Time Losses



The Dexter Metal Sheet Feeder

The Dexter Metal Sheet Feeder automatically feeds sheets to press, coater, slitter or other machine. It handles stock from 38 to 24 gauge, 36 x 44" to 14 x 16", loads up to 6,000 lbs.

The feeder automatically separates and picks up metal sheets from pile and advances them to registering or feeding-in point.

Reloading mechanism eliminates need of stops to reload.

Should two sheets adhere, reject mechanism diverts them to reject tray without stopping machine or slowing down production.

Fewer stops and less tripping make for work of more uniform quality.

There is no marking or scratching of sheets.

Stock may be trucked into feeder by either electric or hand lift trucks or by means of floor load conveyors.

Special feeders can be supplied to handle up to 16 gauge, 48 x 144" and 30,000 lbs. load.

The services of our engineers and organization are available, without obligation to you, for consultation in development of automatic feeding of various types of machines used in your plant for handling tin plate, black iron or other metals in sheets.

Dexter Folder Company

General Sales Offices

330 West 42nd Street, New York 36, N. Y.

Boston, Philadelphia, Washington, Cleveland, Chicago, St. Louis

Agents in principal foreign countries

Get Acquainted with the PEE YELLOW PAGES
WHERE TO BUY
PRINTING EQUIPMENT Engineer
AN INDUSTRY-WIDE TECHNICAL PUBLICATION

May we serve you? We're the "Yellow Pages" of P.E.E.'s Annual Reference Issue and eager to do your bidding. We have the answers to your questions regarding equipment and supplies available for all plant operations.

Any questions about TRADE NAMES? We have the answers from ABC to ZOMO.

Looking for a certain manufacturer, supplier or dealer? We have a comprehensive registration, listed alphabetically.

We're spilling over with a lot of good "tips" on purchasing equipment and supplies for the printing industry, so make it a habit to consult the "Yellow Pages".

"WHERE TO BUY"

Printing Equipment and Supplies Reference Issue

a few copies left — $2.00 each

Goss Opens Modern Plant

SIXTY-EIGHT years after the founding of The Goss Printing Press Co., stockholders assembled Dec. 22, for their first meeting in the new plant and offices of the company. The plant is reported to be the only one in the world designed specifically for the manufacture of rotary printing presses. The manufacturing area, containing 368,000 sq. ft., and offices, containing 49,420 sq. ft., cover approx. 8¼ A. in an outlying Chicago industrial area.

The one-floor, steel-brick-glass structure is designed for efficient production. Raw materials enter at one corner of the plant and move through heavy machining and various light machining departments to sub-assemblies and finally to the erection floor. Located at W. 31st St. and S. Central Ave., Chicago 50, the new Goss home is situated on a 40 ¼ A. tract.

Founders of the Goss company were Jacob J. Walser, its first president, Samuel G. Goss, Frederick L. Goss, Benjamin F. Babcock, David Allard and Julia Babcock.

First manufacturing departments were moved to the new plant in June 1951, when the first section was completed, but the major operations were carried on at 1535 S. Paulina St. until this last Fall, when the large addition to the plant was completed. New offices were finished just before Thanksgiving.

The Goss firm manufactures newspaper, magazine and rotogravure rotary presses. It supplies printing presses for the newspaper field including flatbed web presses, tubular presses, single-width and double-width semi-cylindrical presses and multi-color presses, in addition to stereotype equipment.

The building was said to represent an investment of approx. $5¼ million. Goss also has an English subsidiary, the Goss Printing Press Co., Ltd., employing 550 workers.

In his message to stockholders, Pres. R. C. Corlett stated in part: "... the new location and modern plant should contribute much towards acquiring and holding skilled labor and high caliber engineering and office personnel, as well as enable us to manufacture more economically and efficiently."

Officials of the Goss Printing Press Co. who will direct operations in the firm's new Chicago plant. Goss President R. C. Corlett is at left and C. S. (Pi) Reilly, Vice Pres. in Charge of Sales, at right.

Six presidents have directed operations of the Goss firm. President Corlett, who was appointed to this post in 1942, has been with Goss 35 years. Mr. Corlett; J. A. Riggs, Exec. Vice Pres.; C. S. Crafts, Vice Pres. Engineering; and C. S. Reilly, Vice Pres. Sales, all started in the company's engineering department.

Other officers are: A. O. Holmberg, Vice Pres.-Manufacturing; W. T. Goss, Vice Pres.; K. J. Williams, Treasurer; M. E. Oliphant, Secretary; and Gwendolyn McCallister, Asst. Secretary. The directors include, H. H. Elliott, Chairman, R. C. Corlett, S. G. Goss, Mrs. L. W. Oliphant, M. E. Oliphant and J. A. Riggs.

Long service records are the rule throughout the Goss organization. One man who started as an office boy in 1895 still is employed in the job order department. A veteran erector-service man has been with the company 53 years, and his son has been a salesman for 21 years.

Fifty per cent of Goss journeymen machinists and 85% of the supervisory staff have served their apprenticeship with the company. Goss' apprenticeship program provides training in every manufacturing operation under the supervision of a committee made up of journeymen machinists, foremen and representatives of the U. S. Dept. of Labor.

Aerial view of the new manufacturing office and plant building in Chicago of the Goss Printing Press Co. The plant, which covers approx. 8½ A., will be used for the production of all types of rotary printing presses.

Patents

For The GRAPHIC ARTS

Covering patents issued Nov. 3, 10, 17 and 24.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

BINDERY:

2,659,907. MACHINE FOR FORMING BUNDLES OF SIGNATURES includes a frame having a table provided with an opening through which a wire may be drawn and turned into a plane parallel to the face of the table. An abutment plate is slidably mounted on the table and adapted to grip the end portion of the wire. A pusher-plate mounted on the frame is adapted to move toward and from the abutment plate to open and close a signature receiving pocket adjacent the wire opening. In the plate is a slot to clear the wire and force the slit portion of a signature into frictional gripping engagement with the wire after the signature has been inserted into the pocket. Invented by Lawrence I. Kramer, Park Forest, Ill. Assigned to R. R. Donnelley & Sons Co., Chicago. Application Aug. 20, 1952. 11 Claims.

2,660,101. MECHANISM FOR NUMERICALLY GROUPING BOOKLETS AND THE LIKE. The device is mounted upon the framework of a newspaper trimming machine, and has a feeler slidably mounted thereon to engage each booklet as it is carried along the bed of the trimming machine prior to being ejected onto a flyer. For every stroke of the trimming machine and for every trimmed booklet that is advanced by the trimming machine to a position beneath the feeler, a ratchet wheel mounted in the device is rotated through a distance of one tooth. If a booklet is not advanced to a position beneath the feeler, the feeler will drop by gravity to its full extent and remove a pawl from engagement with the ratchet wheel. Invented by Cecil J. Sadler, Rose Bay, Sydney, New South Wales, Australia. Unassigned. Application Aug. 8, 1950. 1 Claim.

2,660,148. ADHESIVE EXTRUDER FOR BOOKBINDING MACHINES. The apparatus comprises a main body having a chamber therein adapted to be supplied with adhesive under pressure. The chamber has a discharge orifice extending through an exposed surface of the main body for discharge of the adhesive under pressure. A valve is supported by the body for movement between positions respectively opening and closing the orifice. The backs of successive books are guided into aligned relation with the orifice to receive adhesive. Cooperating pump gears are supported in the body. The discharge sides of the pump gears connect with the chamber. The lower portions of the pump gears are received within a supply of fluid adhevise to cause the gears to convey the adhesive to the chamber under pressure for discharge therefrom through the orifice. Invented by Robert E. Fogg, Dayton, O. Assigned to McCall Corporation, Dayton, O. Application July 28, 1951. 21 Claims.

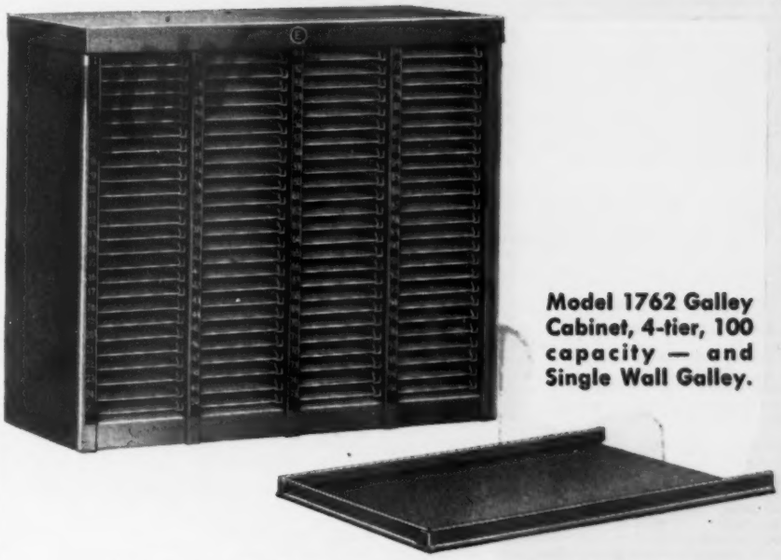
COMPOSING ROOM:

2,657,790. TYPOGRAPHICAL MACHINE is equipped with a matrix magazine removably supported on a base frame. A magazine lifting and supporting plate is pivoted to the base frame. The plate swings upwardly to locate the magazine in position for removal or replacement. A locking device is independent of the magazine support to prevent the magazine from being disengaged. The locking device is released in the upwardly swung position of the plate. Invented by Charles W. Seaward, Hamden, Conn., and John Latorraca, Jamaica Plain, Mass. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application April 15, 1950. 11 Claims.

2,659,478. TYPOGRAPHICAL COMPOSING MACHINE. In or for a typographical machine of the Linotype type equipped with an assembling elevator and a transverse rock shaft connected to the elevator for raising the same, an operating handle is provided for turning the rock shaft either under manual or automatic control to raise the elevator. The handle is provided with two operating elements to make contact with power-operated cams of different radii, one element being rigid for imparting a positive turning movement to the rock shaft under the control of the cam with the smaller radius, and the other being yieldable for imparting an impositive turning movement to the rock shaft under control of the cam of larger radius. Invented by Paul Hilpman, Garden City, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application Dec. 21, 1950. 8 Claims.

2,659,479. TYPOGRAPHICAL MACHINE. A lock including bolts is adapted for the control of separate handles for

lower prices on
Galley Cabinets and Galleys
by Hamilton



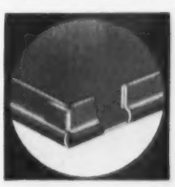
Model 1762 Galley Cabinet, 4-tier, 100 capacity — and Single Wall Galley.

Yes, prices actually are *down* on famous Hamilton Galley Cabinets! They save your floor space—can be stacked two-high even fully loaded—and their rugged, welded steel strength means longer service. Numbered runs and symbol letters provide quick identification. Hamilton *Galleys* are equally serviceable and efficient. See your dealer or write Hamilton today!

Galley Cabinets		Galleys	
Capacity	Price	Size	50 or more Price Ea.
25—12x18	$44.00	3½x23½	$0.60
50—8¾x13	44.00	6¼x23½	.81
100—8¾x13	63.00	8½x23½	.90
100—10x16	80.00	8¾x13	.60
100—12x18	87.00	10x16	.81
100—3½x23½	98.75	12x18	.96
100—6¼x23½	84.00	12½EMx23½	.58
100—8½x23½	96.00	6¼x23½ Mailing	.95

Many other sizes—Prices on request.

All prices listed are f.o.b. Two Rivers, Wisconsin. Delivered prices slightly higher.



Our finest!

Aluminized Steel Galleys . . . Precision double-wall construction

In all sizes, at slightly higher prices—most accurate and durable galleys built! Double-wall strength prevents warping under load, keeps type and cuts square with sides and corners. *Exclusive with Hamilton!*

PRINTING EQUIPMENT DIVISION

Manufacturing Company
Two Rivers, Wisconsin

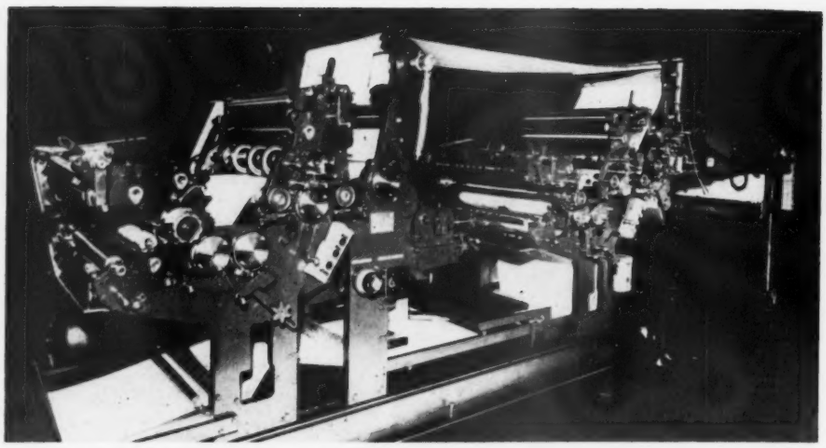
use with a typographical machine equipped with a hinged vise frame and a banking stud for locating the frame in its normal position. The bolts are fulcrumed at corresponding points between their ends so that they may be rocked to and from their locking positions, and the handles which depend from the front ends of the bolts are operatively connected thereto by an arrangement of integral cam-shaped elements housed in appropriate bearing blocks secured to the vise cap. Invented by James C. Plastaras, Lynbrook, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application Jan. 16, 1951. 9 Claims.

FEEDING, FOLDING, DELIVERY:

2,658,406. VARIABLE SPEED FEED MECHANISM is for intermittently feeding a web through a reciprocating press. It includes a rotatable input member and a rotatable output member coaxial with it. A sun gear is disposed on one of the members. A planet gear on the other member meshes with the sun gear. An arm extends from the gear sector for oscillating it. A cam follower carried by the arm is received in a stationary cam track surrounding the axis of the rotatable members. The cam track is shaped to oscillate the sector during its revolution and thereby introduces accelerating and decelerating components into the drive from one of the members to the other. Invented by John G. McIlvain, Jr., East Caln Township, Chester County, Pa. Unassigned. Application May 4, 1951. 9 Claims.

2,660,426. AUTOMATIC SAFETY READJUSTMENT MECHANISM FOR NEWSPAPER PRESS FOLD ROLLERS. The mechanism will operate automatically to move the folding rolls of a newspaper press rapidly toward one another in the event that one of the webs of paper accidentally breaks, so as to prevent jamming known as folder chokes. The breaking of one of the paper webs activates devices operated by electricity, pressure fluid or mechanically, so that the folding rolls are almost instantaneously pushed toward one another to diminish the gap between them so that they will still grip and feed the remainder of the folded newspaper and eject it from the machine, even though the breakage of one of the webs fails to supply the folding rolls with a portion of the paper. Invented by Leslie J. Griner, Detroit, Mich. Unassigned. Application Feb. 4, 1952. 12 Claims.

2,660,430. PACK FEED CONTROL MECHAMISM. A positive control is provided which automatically feeds a stack of papers to a separator device when the preceding papers have been removed from the conveyor by the separator device. The conveyor is driven by an electrically controlled ratchet and pawl drive. A thickness gauge on the paper separating device operates an electrical switch to control the conveyor and thereby move more papers into the device when the supply has reached a predetermined minimum. Invented by Thomas A. Ribich, Cleveland, O. Assigned to Weldon Tool Co., Cleveland, O. Application Sept. 12, 1950. 2 Claims.



Combination Offset-Hot Spot Carbon Press—American Type Founders recently installed the special forms press shown above at National Press, Chicago. In addition to two offset, printing units, there is a hot spot carbon printing unit. The press is equipped with a two roll unwind stand and a flat sheet slow-down delivery. It will number on the face of both webs and perforate both lengthwise and crosswise. It will be used for printing business forms which have spot carbon on the back of one form. Web width is 26 in.; cylinder circumference is 17 in. The overall length of the press is 23 ft. and it runs at speeds up to 10,000 r.p.h. One set of turning bars was furnished with the press.

MISCELLANEOUS:

2,659,048. INDICATING AND RECORDING EQUIPMENT. The apparatus is for determining variations in moisture constant across a moving web of paper during a printing operation. One of a pair of electrodes comprises a roll having a conducting surface. The other electrode is a roll having an insulating surface. A narrow, ribbon-like contact is supported in and extends spirally abound the insulating surface. The rolls are supported adjacent each other to provide a nip. The web of paper under test is passed through the nip whereby the electrodes contact a small segment of paper which moves across the web as the web moves through the rolls. Variation of electrical resistance of web constitutes an accurate measurement of variation of moisture content. Invented by Lowell W. Zabel and Robert W. Schmidt, Neenah, Wis., and Ralph H. Caston, Appleton, Wis. Assigned to Paper Patents Co., Neenah, Wis. Application Feb. 2, 1948. 9 Claims.

MAKE-READY TIME
Reduced with
IMPRUV-A-MAT PROCESS

MOLDS
MACHINES
MAGAZINES
KEY BOARDS
SPACE BANDS
DISTRIBUTORS
MATS
CONTRASTED

NEW
or OLD
TYPE FORMS
ELECTROS
STEREOTYPES
•
OFFSET PLATES
REGRAINED

Removes Air Voids on Display
Permanent Grain on Type Face
Improves Printing Surface and Assembly to Distribution
Prevents Metal Sticking to Mats, Molds, Spacebands, Etc.
•
Service in Your Plant or Ours

IMPRUV-A-MAT CORP.
326 W. MADISON STREET, CHICAGO
CE 6-6009
13309 S. ANN ST., BLUE ISLAND, ILLINOIS
FU 5-6510
400 W. LAKESIDE, CLEVELAND
SU 1-2388
2211 GRAND RIVER, DETROIT
WO 3-6207

Exclusive territories available to companies servicing Printers, Typographers, Newspapers—Write

FRED M. JERNT
326 W. MADISON • CHICAGO, ILLINOIS

Mechanism of the Linotype and Intertype

Written for Machinist-Operators, Machinists, Superintendents and Students

Technical operating knowledge of the Linotype and Intertype is available in the 14th edition of this 334 page book. Revised and amplified by Oscar R. Abel and Windsor A. Straw, the text includes 200 illustrations. Information has been added about late improvements in the machines. A practical and essential book for every composing room.

$5.15 per copy
Postpaid in U.S.A. only

PRINTING EQUIPMENT *Engineer*
1276 W. 3rd St., Cleveland 13, O.

Ninth Production Yearbook

Commercial and newspaper printing plant executives will find constant use for this encyclopediac volume.

Size, 8½ in. by 11¼ in.; 918 pages include 4000 subjects listed in the index, 659 editorial illustrations, and other features.

Many new features included on photoengraving, typography, electrotypes, printing processes, paper, binding, mailing and photography.

$15.75 per copy
Postpaid in U.S.A. only

PRINTING EQUIPMENT Engineer
1276 W. 3rd St. Cleveland 13, O.

A COMPLETE SERVICE!

ADVERTISING ART

COMMERCIAL PHOTOGRAPHY

LETTERPRESS PLATES

OFFSET PLATES

ROTOGRAVURE PLATES

Makers of Fine Printing Plates

GRAPHIC ARTS CORPORATION OF OHIO

110 Ottawa St. • Toledo 4, Ohio • Phone Garfield 3781

DETROIT BRANCH
825 West Elizabeth Street
WOodward 2-9122

CHICAGO
222 West Adams Street
RAndolph 6-5383

NEW YORK
122 E. 42nd Street
OXford 7-2387

In 1954 . . .

The JUNIOR JET 17X22 BAUMFOLDER

. . . will be Your Gold-Mine

As it has been the past two or three years for the 1752 firms who say . . . "it pays for itself many times over every year".

It's the world's closest-precisioned . . . finest, fastest folder . . . makes folding your most profitable operation . . . Five Folds in 1 operation, 60 styles of folds . . . makes perforating practically all profit. It's an automatic folder . . . automatic lightning-speed perforator; automatic scorer; automatic cutter; automatic crimper; all in one. Tomorrow's automatic . . . at a pre-war price (equipped with Friction Feed $100 initial and $48 per month for 30 months . . . with Suction Pile Feed and extra motor and pump, same initial $100 and $10 more per month) . . . A Gold-Mine for a Life-Time . . . Do allow us to mail specifications. Thanks . . . Wishing you a Prosperous New Year to the ONE INDISPENSABLE INDUSTRY . . . The Graphic Arts.

RUSSELL ERNEST BAUM, INC.

615 CHESTNUT STREET • PHILADELPHIA 6, PA.

Telephone LOmbard 3-8164

IT PAYS TO ORDER FROM

EASTERN!

Here's why...

1. You'll always **find what you need** in Eastern's big new catalog of equipment and supplies for stereo, engraving, composing and pressrooms.
2. You'll always save with the **consistent economy** of Eastern's competitive prices.
3. You'll appreciate the **dependability** of Eastern's fast, accurate delivery and service.

You'll find, as hundreds of newspapers have, that Eastern can take better care of all your needs.

CHECK AND ORDER THESE SUPPLIES TODAY:

- Steel Chases
- Galley Cabinets
- Galleys
- Sta-Hi Machinery
- Press Blankets
- Matrix Tape
- Scotch No. 400 Double Coated Tape
- Gummed Backing Tape
- Cork Molding Blankets
- Direct Pressure Molding Materials
- Routing Cutters

EASTERN FOR ECONOMY

E-N-S

Eastern Newspaper Supply, Inc.

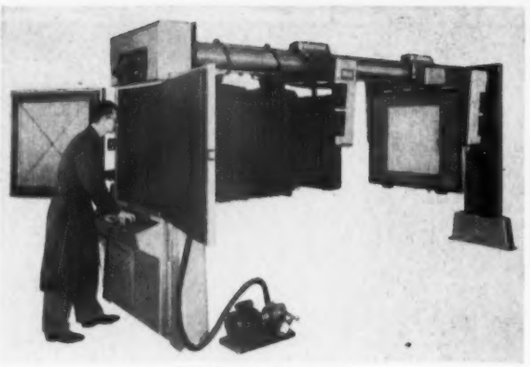
9603 NORTHERN BLVD. • CORONA 68, N. Y.

PLATEMAKING:

2,659,282. METHOD FOR CORRECTION AND MAKE-UP OF TYPE MATTER FOR PLANOGRAPHIC PRINTING PROCESSES. Physical indicia are provided to associate with each line of type at the time it is produced on a "Primary" sheet of film, and are useful for aligning and locating purposes in subsequent correction, trimming and makeup operations. The indicia are in the form of perforations made in the "primary" sheet toward the edges thereof and at the opposite ends of each line, and bear a definite relationship to the line-starting margin and the "base-alignment" level of the respective lines. A line-strip punch adapted to utilize the indicia is employed to align relative to a shearing knife any faulty line required to be severed out of a "primary" sheet to replace it with a correct line. Invented by Herman R. Freund, Brooklyn, N. Y. Assigned to Intertype Corporation, Brooklyn, N. Y. Application Jan. 19, 1950. 5 Claims.

2,659,571. PRINTER'S CENTRAL POST FORM TABLE has a flat platen-like top for the reception and making of printing forms for newspaper stereotype departments and for having true side edges assuring proper "fit-ups" of the top to banks, mat rollers, or direct pressure machines. The column or post of the table is provided with a suitable base affording extended lateral support for the table and is mounted on casters, the parts being largely of hollow construction for lightness and strength and the whole correctly balanced for ready movement with minimum effort about its area of use. Invented by John L. Ferguson, Jr., Joliet, Ill. Assigned to Printing Equipment Corp., Joliet, Ill. Application April 9, 1949. 10 Claims.

2,659,670. METHOD OF DEVELOPING ELECTROSTATIC IMAGES. The method uses a composition which is an electroscopic developing powder, or toner, which is capable of producing permanent images on paper, cloth, plastic and metal surfaces. The images are wettable by lithographic inks and are capable of bonding to both metal and paper offset plates to form durable printing plates capable of printing many thousands of copies when used for offset printing and duplication. The composition is made up of a combination of synthetic and natural resins, such as phenol formaldehyde resin, together with a pigment such as carbon black, chrome yellow, and ultramarine blue. The developer or toner is first deposited on a surface bearing an electrostatic latent image and is then transferred to a paper or other backing and fused to the backing at a temperature below the char point of the backing. Invented by Harold E. Copley, Worthington, O. Assigned, by mesne assignments, to The Haloid Co., Rochester, N. Y. Application June 6, 1950. 3 Claims.

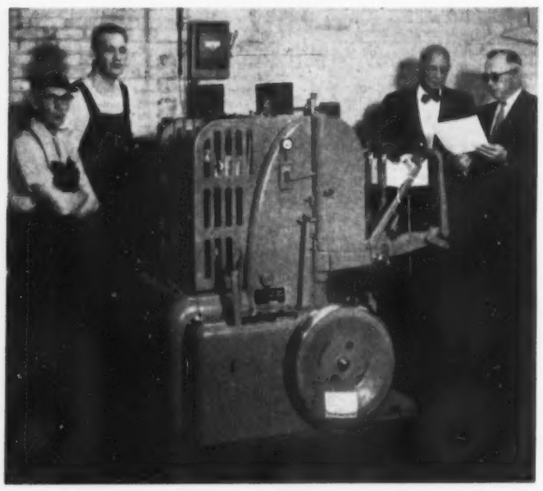


Overhead Cameras

A new series of all metal overhead monorail cameras, designated as the Tri-Color Series II, has been announced by Robertson Photo-mechanix, Inc., Chicago. This new series is built as standard in 31 in. and 41 in. film sizes, with larger sizes available on special order. Tri-Color Series II are said to be heavier and more rugged than older models. It is also claimed that the new Multiflex lensboard provides more positive lensboard movement with absolutely no creep. Greater ease of focusing is possible by the use of counters and vernier dials calibrated in 0.001 in. Improvements on the electrical screw drive and the one-piece monorail combine to provide further advancements, the sponsor maintains. Further details may be obtained by mentioning PEE No. 48.

2,657,611. DOT COMPARATOR. An instrument is provided for estimating printed half-tone dot areas. In includes a frame having a base. A magnifying glass is mounted in the frame so as to be focused near the bottom of the base. An annular photographic image of a progressively graded series of halftone dots, having a size and spacing used on printing plates, is embedded in transparent material and mounted in the base so that the center of the image is a sight opening near the focal center of the magnifying glass. Invented by Paul F. Borth, Park Forest, Ill. Assigned to R. R. Donnelley & Sons Co., Chicago. Application June 13, 1952. 1 Claim.

2,659,278. TRIMMING MACHINE is for use in trimming wood-mounted printing plates of all kinds to specified dimensions, and for effecting a mirror-like finish on the trimmed sides of the plates. The device includes a cutter element rotatably mounted on a frame. A work support is pivotally mounted on the frame for movement in a forward and rearward direction from an initial starting position, whereby a point on the work support generates a plane parallel to the rotational axis of the cutter element. The latter is caused to return to the initial starting position from any position of forward pivotal movement. Invented by Roy M. Schultz, Chicago, Ill. Assigned to Pontiac Engraving & Electrotype Co., Chicago. Application May 2, 1950. 23 Claims.



Miehle's 19,000th Vertical Installation—Miehle Printing Press & Mfg. Co. reports the installation of its latest model V-50 Vertical Press No. 19,000 at the Rocky Mountain Bank Note Co., Salt Lake City, Utah. The first Miehle Vertical was introduced in 1922. Shown here with the 19,000th installation, from left to right, are: J. J. Jensen, Plant Supt.; George Mitchell, Pressman; Malcolm Dennison, Vice Pres. and Manager, all of Rocky Mountain Bank Note Co.; and C. R. Endicott, Miehle's Los Angeles Manager.

PRINTING PRESSES AND EQUIPMENT:

2,658,798. THIS ELECTRIC DRYING UNIT is for attachment to printing presses for continuously and quickly drying printers ink on sheet material. The unit comprises a hot air distributor adapted to extend transversely across a press. The distributor is a cylinder imperforate with the exception of a longitudinally extending row of outlet openings. Caps close opposite ends of the cylinder. An imperforate air conducting pipe extends axially into and is spaced

SPEED PRODUCTION with RICHARDS
PLATE WORKING MACHINES
SAWS — ROUTERS MORTISERS
ELECTROMATIC STEREOTYPERS CIRCULAR SAW
CODE (EST) 27 x 36 TABLE ALSO 32 x 42 (ESST)
SAVE PRESS TIME
(EMM) 'Electromatic' MORTISING MACHINES IN PEDESTAL OR BENCH MODELS
Flat and Curved Shell or Typhi
Curved and Tubular Plate Enclosed Routers
(PMRS) RADIAL ROUTER
Straightline And Fine Detail Routing
ROUT OUT SMASHES
PATCH
SAVE PRESS TIME
Ask For Circulars
J. A. RICHARDS COMPANY, Kalamazoo 60F, Michigan

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC. Munsey Bldg., Washington, D.C.

from the inner surface of the cylinder. Opposite ends of the pipe are open. The pipe enters the cylinder through one end cap and terminates short of the opposite end cap for directing air against that cap. Air is forced into pipe through its outer end. Invented by Rudolph L. Meltzer, Henry E. Meltzer, and William D. Warner, Racine, Wis. Assigned to Master Appliance Mfg. Co., Racine, Wis. Application Nov. 14, 1951. 3 Claims.

2,659,237. REVERSING DRIVE MECHANISM is provided for transmitting alternating forward and rearward rotation to a reverse motion shaft. There is a gear on the shaft, a constant speed forward motion shaft, and a gear segment adapted to mesh with the gear for effecting constant speed rotation in a forward direction to the reverse motion shaft in a reciprocating bed printing press. A coacting cam and roller arrangement is carried by the shafts for transmitting from the constant speed shaft to the reverse motion shaft accelerating motion from zero speed to the constant speed, and decelerating motion from the constant speed to zero speed. The reverse motion shaft is rotated in the rearward direction through an angle equal to the angle of its forward rotation and terminates at zero speed. Invented by James R. Wood, Cleveland, O. Assigned to Harris-Seybold Co., Cleveland, O. Application July 2, 1952. 12 Claims.

2,659,305. MULTICOLOR ROTARY, INTAGLIO, LETTERPRESS, AND OFFSET PRINTING PRESS consists of a paper feeder, a first drum of large diameter upon which printing plates for direct printing may be fixed, and a pressing cylinder having the same diameter as the first drum but rotating in the opposite direction. A wiping cleaning device removes excess ink from the surface of the printing plates after they have been inked by inking rollers. An endless conveyor carries the printed sheets from the pressing cylinder to an interleaving device. The conveyor cooperates with the interleaving device for interleaving paper sheets between the printed sheets. An air blower ejects air blasts in the path of the printed sheets on the convevor. A delivery table receives the printed sheets and the interleaving sheets. Invented by Gualtiero Giori, Buenos Aires, Argentina. Unassigned. Application Jan. 23, 1950. 2 Claims.

2,659,306. MEANS FOR VARYING THE CIRCUMFERENCE OF PRINTING CYLINDERS. An adjustable circumference printing cylinder comprises a carrier roll including a central cylindrical portion, from the opposite ends of which axial shafts of lesser diameter project. A pair of complementary partial cylinder shells include radial members adapted to engage portions of the outer surface of the carrier roll. A continuous annular peripheral socket is detachably secured to opposite ends of the central cylindrical portion and is carried by the carrier roll. The socket is adapted to overhang an end of the central portion and engage one end of the shells to and in driven relationship with the carrier roll. Invented by Walter W. DeLano, Hamilton, O. Assigned to The Hamilton Tool Co., Hamilton, O. Application March 8, 1951. 5 Claims.

2,659,437. CUTTING AND GRIPPING MECHANISM FOR PRINTING MACHINES. The mechanism is for use with high speed web printing machines operating on a web. It includes a large diameter cylinder around which the web is wrapped. A straight edge cutting element is carried by the cylinder and is positioned below its surface. A V-shaped cutting member is arranged to coact with the straight cutting element. Radially positioned grippers are carried by the large diameter cylinder. Trucking blades are associated with the V-shaped cutting member. The trucking blades are arranged to tuck the leading end of the web beneath the grippers. Invented by William F. Huck, Forest Hills, N. Y. Assigned to Huck Company, New York, N. Y. Application March 4, 1947. 9 Claims.

2,659,599. ADJUSTABLE TENSION BACKSTOP FOR MIEHLE VERTICAL PRINTING PRESSES. The backstop is attached to the press in such manner that it does not interfere with any of the operations of the press and it requires no alterations in the press construction. This is accomplished by providing a support bar that fits along the rear edge of the feeder table and which is anchored to it by clamps which engage the side edges of the table. Detachably secured to this support bar are a pair of arms which extend forwardly over the top face of the table and each of which carries a sheet edge engaging element that is spring biased under adjustable tension. Invented by Emil P. Valley, Chicago. Unassigned. Application June 2, 1949. 4 Claims.

2,660,115. CIRCUMFERENTIAL CYLINDER REGISTER MECHANISM FOR ROTARY PRINTING MACHINES. An extended hub is incorporated on the spur gear wheel of a rotary printing machine. The hub bears an axially displaceable helical gear wheel of the mechanism. An internal gear on the spur gear wheel meshes with an external gear for transmitting rotation of the axially displaceable helical gear wheel to the spur gear wheel. Invented by Max Ras, Zurich, Switzerland. Unassigned. Application Dec. 28, 1949. 2 Claims.

Rosback "Twenty-two Special"

● You can easily identify the Rosback "Twenty-two Special" because there's no other rotary slot perforator like it. The "Twenty-two Special" is the perforator with the "winking eye" —a small, automatic electric indicator which makes it easy for the most inexperienced beginner to feed "strike" perforating smoothly and accurately.

And you'll discover other profit-making features in the Rosback "Twenty-two Special":

1. Takes a full 25" sheet, either way through.

2. Variable speed control provides faster production on short sheets.

3. Does either "strike" or continuous perforating.

4. Length of "strike" is set by calibrated dial.

5. Can be equipped to do "snap-out" perforating; also scoring or creasing, as well as regular slot perforating.

6. Low in price . . . costs less than any other rotary perforator that will take full 25" sheets with plenty of room to spare for side register adjustments.

Ask your Rosback dealer for full details—or write us for descriptive bulletin and price.

F. P. ROSBACK COMPANY • *Benton Harbor, Mich.*

LARGEST PERFORATOR FACTORY IN THE WORLD

Conference Dates

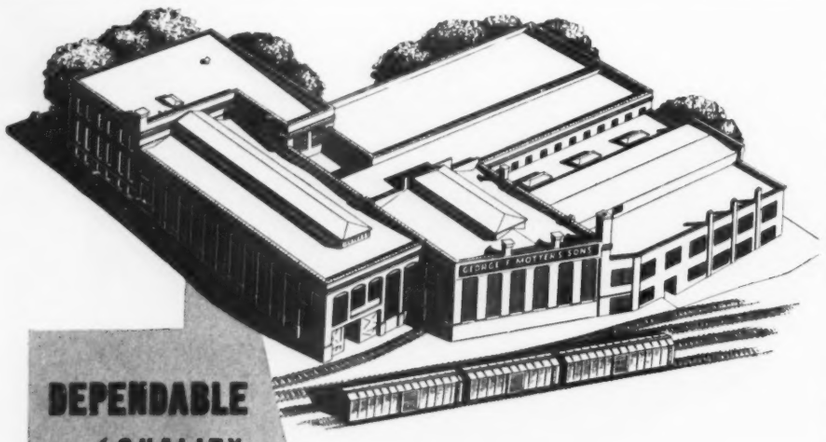
(With Organization Names and Principal Officers)

American Photoengravers Assoc. — 1954 Conf., Hotel Jefferson, St. Louis, Mo., Oct. 11, 12, 13. Pres., D. H. Murnik, Oakland National Engraving & Gravure Co., 307 Tenth St., Oakland 7, Calif.; Exec. Secy., Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf. — 1954 Conf., Chalfonte-Haddon Hall Hotel, Atlantic City, N. J., June 7, 8, 9. Chairman of the Committee, Joseph E. McMullen, Prod. Mgr., Milwaukee (Wis.) *Journal;* Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute — 1954 Spring Meeting, Plaza Hotel, Apr. 8, New York, N. Y. Pres. Sidney Satenstein, American Book-Stratford Press, Inc., 75 Varick St., New York 13, N. Y.; Secy., Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. — 1954 Conf., William Penn Hotel, Pittsburgh, Pa., June 11, 12. Pres., Robert Edgar, Pres., Neyhart Printing Co., 244 Blvd. of the Allies, Pittsburgh, Pa.; Secy-Treas., Robert Wolf, Richardson-Taylor-Globe Co., 4501 Mitchell Ave., Cincinnati 32, Ohio.



DEPENDABLE
✓QUALITY
✓DELIVERY
✓SERVICE

RESULTS...

George F. Motter's Sons have enjoyed steady growth for 116 years because of the quality built into their products. The wide acceptance of George F. Motter's presses and folders is a result of the craftsmanship developed through the years. Today George F. Motter's Sons are completing an addition to their plant that increases their productive floor space by 25% and are increasing machining facilities for the manufacture of rotogravure presses, high speed folders, and auxiliary equipment to meet the exacting requirements and the high speeds needed by the fast growing gravure industry.

GEORGE F. MOTTER'S SONS—YORK, PA.
Custom-Built Rotogravure Presses - High Speed Folders
Auxiliary Equipment for Rotogravure Printers

Graphic Arts Trade Assoc. Executives—1954 Conf. Sinton Hotel, Mar. 27,28, Cincinnati, O. Pres. Richard A. Stout, Exec. Dir., Printing Industry of Atlanta, 881 Piedmont Ave., N.E., Atlanta, Ga.; Secy., Arthur L. Johnson, Graphic Arts Assoc. of Milwaukee, 704 W. Wisconsin Ave., Milwaukee 3, Wis.

Gravure Technical Assoc. — 1954 Annual Meeting, Hotel Biltmore, New York, N.Y., Feb. 3, 4, 5. Pres. John E. Hazel, New York *Daily News*, 700 Pacific St., Brooklyn 17; Secy.-Treas., Frank Sportelli, International Color Gravure, 39 W. 60th St., New York 23, N. Y.

Great Lakes Newspaper Mechanical Conf. — Secy.-Treas., Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. — 1954 meeting, Hotel Custer, Sept. 25-26, Galesburg, Ill. Pres. Eldon L. Martin, Galesburg (Ill.) *Register-Mail;* Secy.-Treas., Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.; Chairman Supplymen's Committee, Joseph D. Goggin, Newspaper Publishers Supply Co., 1639 N. Lorel Ave., Chicago 39.

Intl. Assoc. Electrotypers & Stereotypers — 1954 Conf., Greenbrier Hotel, White Sulphur Springs, W. Va., Oct. 28-Nov. 1. Pres., Carl N. Becker, Becker Electrotype Co., 144 N. Water St., Milwaukee 2, Wis.; Exec. Secy., A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen — 1954 Conv., Bellevue-Stratford Hotel, Philadelphia, Aug. 8-11. Pres., Howard N. King, The Maple Press, York, Pa.; Exec. Secy., Pearl E. Oldt., Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.; Convention Chairman, Ray Miller, 300 Valley View Rd., Media, Pa.

Intl. Graphic Arts Education Assoc.—1954 Conf., University of Colorado Campus, Boulder, Colo., early in July, exact dates to be announced later. Pres., Patrick F. Boughal, New York School of Printing, 461 Eighth Ave., New York 1, N. Y.; Exec. Secy., Samuel S. Burt, 719 Fifteenth St., N. W., Washington 5, D. C.

Intl. Typographic Composition Assoc. — 1954 Conv., Hotel LaSalle, Chicago, Sept. 23, 24, 25. Pres., Harold L. McGirr, Morris & Walsh Typesetting Co., Inc., 129 Lafayette St., New York, N. Y.; Frank M. Sherman, Exec. Dir., 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf. —Secy.-Treas., Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—Secy.-Treas., Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kan.; Sec'y., William Bray, Missouri Press Assoc., Walter William Hall, Columbia, Mo.

Lithographers National Assoc. — 1954 Conv., The Greenbrier, White Sulphur Springs, W. Va., June 8, 9, 10. Pres., William H. Walters, President, United States Printing and Lithograph Co., Old Country & Glen Cove Rds., Mineola, L. I., N. Y.; Exec. Dir., W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Mechanical Conf.—1954 Conf., Penn-Harris Hotel, Harrisburg, Pa., Mar. 18, 19, 20. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania

Newspaper Publishers Assoc. Conf. Co-chairmen, Allen C. Spurgeon, Mechanical Supt., Uniontown (Pa.) Newspapers, Inc.; Jules L. Plangere, Mechanical Supt., Asbury Park (N. J.) *Press;* Conf. Dir., Theodore A. Serrill, PNPA General Mgr., 209 Telegraph Bldg., Harrisburg, Pa.

National Assoc. of Litho Clubs — 1954 Conv., Hotel Biltmore, New York, N. Y., May 7,8. Pres., Andrew Balika, Supt., Copifyer Lithograph Corp., 1771 E. 24th St., Cleveland; Exec. Secy., Sol D'Allesandro, Supt., Horn & Norris, Inc., 2729 Prospect Ave., Cleveland.

National Assoc. of Photo-Lithographers—Pres., A. J. Fay, 75 Varrick St., New York, N. Y.; Exec. Vice Pres., Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc. Pres., Robert B. Tullis, Pres., Miller Printing Machinery Co., 1101 Reedsdale St., Pittsburgh 33, Pa.; Secy., James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Div.—Gen. Chairman, Peter J. Bernard, Director of Personnel and Safety, H. Wolff Book Mfg. Co., 508 W. 26th St., New York 1, N. Y.; Staff Rep., Fred Lubet, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Mechanical Conf. — 1954 Conf., Hotel Statler, Boston, Mass., Oct. 16-17. Pres., J. William Powers, Mech. Supt., Burlington (Vt.) *Free Press;* Secy.-Treas., Walter C. Crighton, Comp Room Supt., New London (Conn.) *Day.*

Northwest Mechanical Conf.—1954 Conf., Radisson Hotel, Minneapolis, Minn., Feb. 27,28, and March 1. Pres., John R. Copeland, Production Mgr., Minneapolis (Minn.) *Star* and *Tribune;* Secy.-Treas., Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conf. — 1954 meeting, Multnomah Hotel, Portland, Ore., Sept. 17-19. Pres., Wm. E. Gibbons, Prod. Mgr., Portland (Ore.) *Journal;* Secy., Don Newhouse, Prod. Mgr., Portland (Ore.) *Oregonian;* Chairman Supplymen's Committee, Intertype Corp., Portland, Ore.

Printing Industry of America—1954 Conf., Hotel Statler, Detroit, Mich., Nov. 15-19. Pres., James J. Rudisill, Rudisill & Co., Lancaster, Pa.; Gen. Mgr., James R. Brackett, 719 Fifteenth St., N.W., Washington 5, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc. — 1954 annual meeting, Kalamazoo, Mich., May 11-12. The 1955 meeting to be held on May 12-13, city and hotel to be announced later. Pres., Edward J. Triebe, Vice Pres., Kingsport Press, Kingsport, Tenn.; Exec. Secy., John Reed, 719 Fifteenth St., N.W., Washington 5, D. C.

Screen Process Printing Assoc. — Pres., Joseph Grossman, Masta Displays, Inc., 230 W. 17th St., New York 11, N. Y.; Secy., Dan Novak, 549 W. Randolph St., Chicago 6.

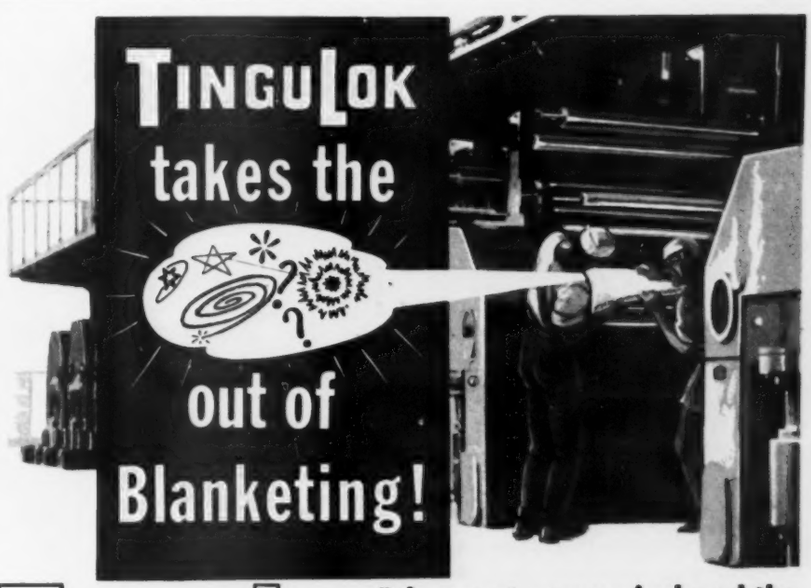
SNPA (Eastern Div.) Mechanical Conf.—1954 Conf. tentatively set for Aug. 23, 24, Montgomery, Ala. Exact dates and hotel to be announced later. Conf. Chairman, C. Lerov Ray, Mechanical Supt., Winston-Salem (N. C.) *Journal* and *Sentinel;* Secy., Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman of Mfrs. and Suppliers Group to be announced later.

SNPA (Western Div.) Mechanical Conf.—1954 Conf., Hotel Marion, Little Rock, Ark., March 7-9. Chairman, Palmer Black, Mechanical Supt. Amarillo (Tex.) *Globe-Times;* Secy., Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman of Supplymen's Committee, Karl L. Ponath, Mgr., Mergenthaler Linotype Co., 514 Browder St., Dallas 1, Texas.

Technical Assoc. of the Graphic Arts—1954 Conv., Schroeder Hotel, Milwaukee, Wis., May 10, 11. Pres., Richard F. Shaffer, Pratt Institute, 215 Ryerson St., Brooklyn 5, N. Y. Secy.-Treas., George S. Hammer, 8 Cherry St., Marblehead, Mass.; Convention Chairman, J. L. Roser, Milprint, Inc., 4200 N. Holten St., Milwaukee 1, Wis.

Rear Edge of Sheet Wipes the Form

A slur or ink wipe on the rear end of the sheet, caused by stiff card or paper slapping against the rear edge of the form, may be prevented with minimum trouble by turning a piece of 5-pica furniture on edge to take the slap and keep it off the edge of the form. The 5-pica strip is 1 pica under type high and so escapes inking by the rollers.



TINGULOK (PATENT PENDING) "the most economical and the simplest system of blanketing rotary presses"

The really "hot news off the press" is about TINGULOK:

1. Hands and fingers SAFE FROM INJURY in putting on blankets!
2. Blankets put on in less time!
3. Blankets more securely attached to impression cylinders!
4. Blankets do not shift or WALK from side to side.

TO INSTALL: TINGULOK uses two reels in blanket cylinder. Can also be adapted to one reel cylinders. The old canvas flaps, if any, are removed. The TINGULOK Lead Flap is applied to the lead or pin end roll. The TINGULOK Tail Flap is put on the other reel. It is not necessary to take reels out of the press to install TINGULOK Flaps.

TO BLANKET: Simply run clipper lace wire through elements on TINGULOK Lead Flap and TINGULOK Blankets and Drawsheet. Reel in until reinforcement on Drawsheet is below opening. Wrap blankets around cylinder and run wire through lacing on tail of Drawsheet. Reel in!

It's as simple as that...no pain, no strain, and no blankety blank in blanketing! TINGULOK Flaps and Blankets are made up complete...no preparation of Blankets and Drawsheets necessary!

TINGUE-BROWN & CO.

1765 Carter Avenue, New York 57, N. Y.....CYpress 9-8800
507 Bishop Street, N.W., Atlanta, Ga.....ATwood 3864
1227 Wabash Avenue, Chicago 5, Ill.....HArrison 7-0083
723 E. Washington Blvd., Los Angeles, Cal.....PRospect 6023

Equipment & Supplies

(Continued from Page 32)

Calrod Heating Catalog

The 1954 edition of General Electric's catalog on Calrod electric heaters and heating devices is available. Included in the 60 page, two-color catalog are descriptions of the units in terms of application, special features and installation. More than 175 illustrations are used to show the various products, including immersion, strip, cartridge, tubular, insertion, and fin heaters, melting pots, thermostats, switches and oven heaters. Indexed by processes and application, the catalog also contains methods for determining power requirements and heat losses for many applications. Another feature of the publication is an index of industrial heating application bulletins, and data and specification sheets available. Copies may be obtained by requesting PEE No. 43.

Improved Double-Coated Tape

An improved Scotch brand double-coated tissue tape No. 400 designed for jobs requiring a tape that's sticky on both sides, has been announced by Minnesota Mining and Mfg. Co. Among its uses, states MMM, are to prevent workups on type forms and for mounting printing plates to bases and curved cylinders. The company claims the two-sided tape sticks at a touch for mounting metal to metal, metal to wood, or for a number of splicing jobs involving paper, cloth and metal foils. Sponsor further claims the following advantages for the tape: (1) A tan protective liner to minimize loss of tackiness during storage; (2) Liner removal has been made easier; and (3) The tape, minus the liner, is nearly 1 mil thinner than the original tape. The No. 400 tape is available in ¼ in. to 20 in. widths on 36 yd. rolls. Please refer to PEE No. 44 for additional information.

Photoengraver's Fibre Drain Pipe

A new application of L-M Fibre Pipe in the photoengraving industry has been announced by A. W. Schroeder, President

of Schroeder Engraving Co., Milwaukee, Wis. Schroeder reports that in 1946 his firm installed an experimental acid drainage line of 4 in. L. M. Fibre Pipe. In 1952, the company installed a section of 6 in. fibre pipe for venting the zinc etching machine. Schroeder also reports that: "To date we have been unable to discern any appreciable erosion within the pipe, either from the corrosive action of the acids transported, or from the abrasive action of the pumice stone which they hold in suspension." For further information, please mention PEE No. 49.

Proof Drying Cabinet

The Esrever Proof Drying Cabinet is equipped with one Corona-Merco Infrared Tube for even drying of freshly printed proofs, according to the Esrever Company. It is claimed the infrared tube provides even heat without hot spots. Constructed of 24 ga. steel, the cabinet measures 24 in. by 24 in. by 18 in. Its weight is 27 lbs. and is finished in Hammertone silver gray. The Corona-Merco tube operates on 110 v., a.c. or d.c. Please request PEE No. 57 when writing for additional information.

Fork Truck Bulletin

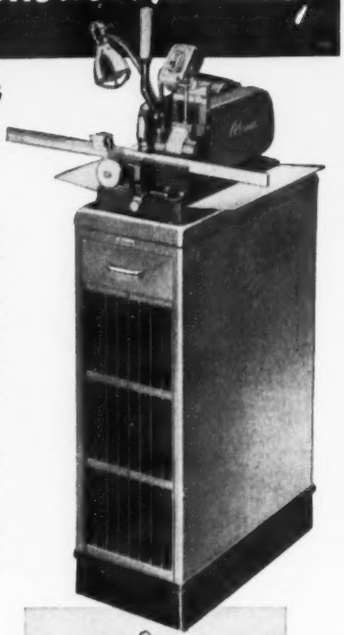
A 2000 lb. capacity fork truck, designed for fast tiering and available in two models, is described in a four page bulletin issued by the Elwell-Parker Electric Co. One model, with a 68 in. lift, is especially adapted for freight car and truck loading. The other model has an 83 in. lift and is designed for high tiering where headroom is unrestricted.

The 68 in. model is equipped with a compound lift type cylinder which provides 50 in. of lift before the overall height is increased. The other model uses

DO THE WORK OF HOURS *in Minutes!*

SLASH YOUR PRINTING COSTS WITH THE

Rouse POWER MITERER



If you need miters in either small or large quantities, no other machine nor method can turn out anywhere near as many perfect joining miters so quickly from strip material. That's how the Rouse Power Miterer can slash your printing costs by doing work in minutes that now takes you hours.

A Rouse Power Miterer won't cost you one cent! Printers the world over say that money paid for a Rouse Power Miterer quickly comes back through tremendous savings in expensive time. After getting your money back, you'll start collecting daily dividends from permanently lower operating costs.

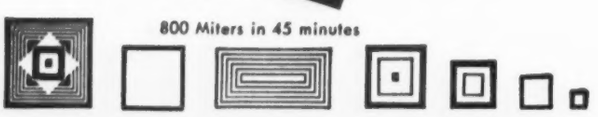
FROM THE SMALLEST JOB SHOP UP TO THE LARGEST PLANT, ONLY ROUSE MAKES A POWER MITERER FOR EVERY TYPE OF USE.

You may buy any Rouse Power Miterer as a bench model or with any other equipment you wish.

Virtually every printing plant in the world uses one or more Rouse products.

NEW ROUSE CATALOG

Write for your copy TODAY!



800 Miters in 45 minutes

H. B. ROUSE & COMPANY

2214 NO. WAYNE AVE., CHICAGO 14, ILLINOIS

ROUSE PRODUCTS – THE STANDARD OF THE WORLD FOR 50 YEARS

MITERING MACHINES
LEAD and RULE CUTTERS
COMPOSING STICKS
TYPE GAUGES
SLUG CLIPPERS
BAND SAWS

a simplex lift cylinder providing 17 in. of initial lift. Its telescoping feature will raise a load to a total height of 130 in.

Both models are battery powered. The operator rides in a sitting position. Two-wheel caster-type steering is used to absorb shocks and provide maximum angle turning. Copies of the bulletin are available by requesting PEE No. 59 in your letter.

Double Wall Galleys

Foster Mfg. Co. has made an improved double wall galley a standard in its line of composing room equipment. The new double wall construction, it is said, provides a reinforced galley for longer life, ease of handling, and safer use. A free sample galley and catalog of the company's line of composing room equipment are available upon request. Please mention PEE No. 51 in your request.

Contact Screens Made

Sixty-line Kodak Magenta Contact Screens designed for screen process printers and photolithographers have been announced by Eastman Kodak Co. The new screens, the company believes, will be helpful in the preparation of halftone positives for printing with Kodak Ektagraph Film. They are also expected to be valuable in the making of coarse screen negatives for photolithography. Screens cover film sizes range from 8 x 10 in. to 22x 23 in. In requesting further details, please mention PEE No. 50.

Skin Protection

Two ointments, Clerex and Hydrepel A-S, have been developed by Hygiene Research Inc., New York, N. Y., and Los Angeles, to protect the skin against extreme exposure to industrial irritants. Clerex protects skin from organic solvents and solvent-borne irritants. Hydrephel A-S gives protection from water solutions and water-borne irritants. Clerex is packaged in 3 oz. tubes; Hydrepel AS are available in 1 oz. and $2\frac{5}{10}$ oz. tubes. Hydrepel remover may be obtained in 1 qt. and 1 gal. containers. Please specify PEE No. 45 when inquiring for further information.

Printing Week

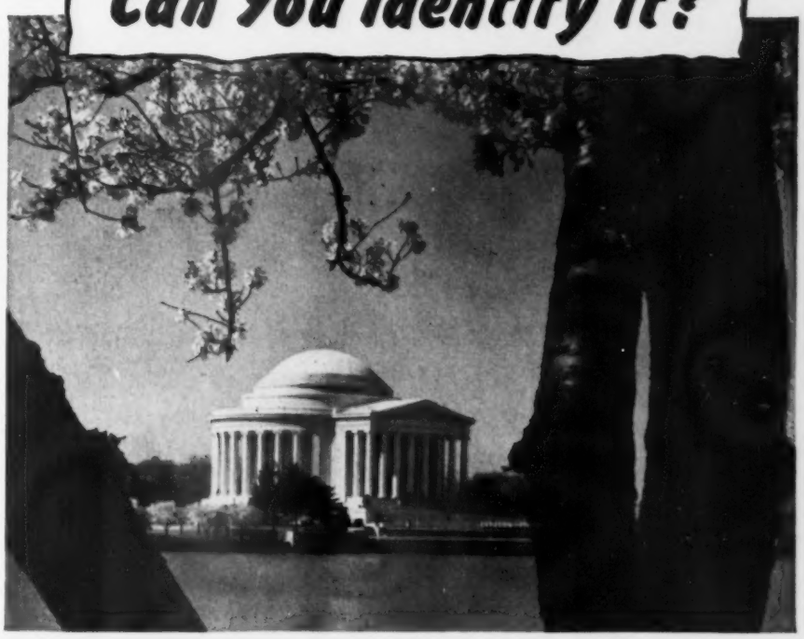
(Continued from Page 44)

ing Week celebration with the three metropolitan newspapers in the city each issuing special sections which reached well over one million readers. Louis Bromfield, famous author and conservationist, was the speaker at the All-Industry Banquet. Nearly 50 Graphic Arts organizations cooperated in the program some of which sponsored special educational meetings. Among these was the Cleveland Advertising Club's event featuring Claude E. McBroom, Director of Mfg., Meredith Publishing Co., Des Moines, Ia., who spoke on *People, Advertising and the Printed Word*. Two college scholarships were also given in contests conducted during the Week, one to Rochester Institute of Technology. All Cleveland radio and television stations cooperated in devoting a number of their programs to Printing Week topics. A large display at the Cleveland Public Library and selection of a Miss Graphic Arts were among the other features of the observance.

New York—St. Louis

Once again, the 67 Graphic Arts groups of New York, N. Y., staged a week-long program of events in which was featured presentation of the New York Employing Printers Assoc.'s Franklin Award for Distinguished Service to Henry R. Luce, Editor-in-Chief of all Time, Inc., publications. A special tribute to Benjamin Franklin was delivered on this occasion by Dr. Grayson Kirk, President of Columbia University. Another feature was the 12th Exhibition of the products of the printing industry of the New York metropolitan area. Among the many educational meetings and clinics were ones entitled Workshop in Typography, Art of the Lithographic Platemaker, More Value in Company Publications, and Binding and Finishing Techniques as Aids to Effective Printing. The Intl. Benjamin Franklin Society presented its gold medal to Herbert Hoover, ex-President of the United States. A number of activities were also

Can You Identify It?



• The cherry blossoms help place it in Washington, D. C. But—is it the Lincoln or Jefferson Memorial?

In stereo work good reproductions are easily identified by sharpness of detail . . . gradation of tones. For such favorable results time after time—line or halftone—leading stereotypers *depend* on BURGESS MATS. They *know* that BURGESS MATS register every detail without fail.

There's no substitute for quality . . . so it will pay you to use BURGESS MATS.

(*Jefferson Memorial*)

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors
of Burgess Chrome and Tone-Tex Mats
Freeport, Illinois

A Laboratory Product
BURGESS Chrome MATS

held during the Week at the New York School of Printing.

St. Louis Craftsmen marked Printing Week by devoting a special meeting program to the observance. Speaker was Munro Roberts, Director of Personal Relations, St. Louis *Post Dispatch*. Tribute was also paid to Craftsmen who have been associated with the St. Louis Club for 25 or more years.

San Francisco—Chicago

The rise of new competitive forces in the West was hailed by Harold L. Zellerbach, President of the Zellerbach Paper Co., at the San Francisco Annual All-Industry Printing Week Banquet. The affair, attended by more than 500, was the highlight of that city's celebration. It was sponsored by all the Graphic Arts organizations of San Francisco. A number of Graphic Arts leaders were presented with busts of Benjamin Franklin in honor of their service to the industry. Included among them was Army Capt. William Goodwin who served for over two years in Korea developing printing and lithographic techniques for the ROK forces.

Chicago, which has laid claims to being the largest commercial printing center in the United States, presented perhaps its largest Printing Week observance under sponsorship of 40 Graphic Arts associations. Speakers at different events included Paul C. Clovis, President, Twentieth Century Press, Chicago; Edward A. Hayes, former National Commander of the American Legion; General Charles C. Haffner, jr., Chairman of the Board, R. R. Donnelley & Sons Co., Chicago; William H. Sleepeck, jr., President, Sleepeck-Helman Printing Co., Chicago; U. S. Public Printer Raymond Blattenberger, Washington, D. C.; and Wayne V. Harsha, Editor, *The Inland Printer*. More than 5000 high school students in Chicago were addressed by the Printing Week Speaker's Bureau on the theme *Career Opportunities in the Graphic Arts*. A wreath laying ceremony at the statue of Benjamin Franklin, open house held by a number of printers in the city, local radio and television programs and exhibits of printing were among other activities presented during the week.

PRINTING INDUSTRY IN ECONOMIC LIFE

At the Printing Week observance held jointly by the Washington (D.C.) Club of Printing House Craftsmen and the Graphic Arts Assoc. of Washington, D. C., in Alexandria, Va., on Jan. 19, Augustus E Giegengack spoke. Giegengack is Vice President of Army Times Pub. Co. His topic was *The Position of the Printing Industry in our Economic Life*.

Giegengack asserted that in attempting to improve the already high standing of the printing industry, management individually should try to pay attention to (1) Better management, and (2) The pressing need for new blood in the industry. He observed: "Printing will constantly expand if we get the help, both in *technological development* and in markets."

Elmira, N. Y.—Smithsonian Institution

There were some cities around the country which lacked organized celebrations of 1954 Printing Week but the industry was saluted nevertheless in the editorial columns of the local newspaper. Typical of these was Elmira, N. Y., where the Elmira *Sunday Telegram* carried a half-page of pictures on January 17 in recognition of the local industry. Scenes taken in such Elmira plants as the F. M. Howell Co., Star-Gazette, Inc., Moore Business Forms, Inc., and the Commercial Press of Elmira, Inc., were presented together with brief histories of these companies.

A permanent exhibit of offset-lithography was presented to the Smithsonian Institution, Washington, D. C., by the Lithographers National Assoc. in observance of International Printing Week. The

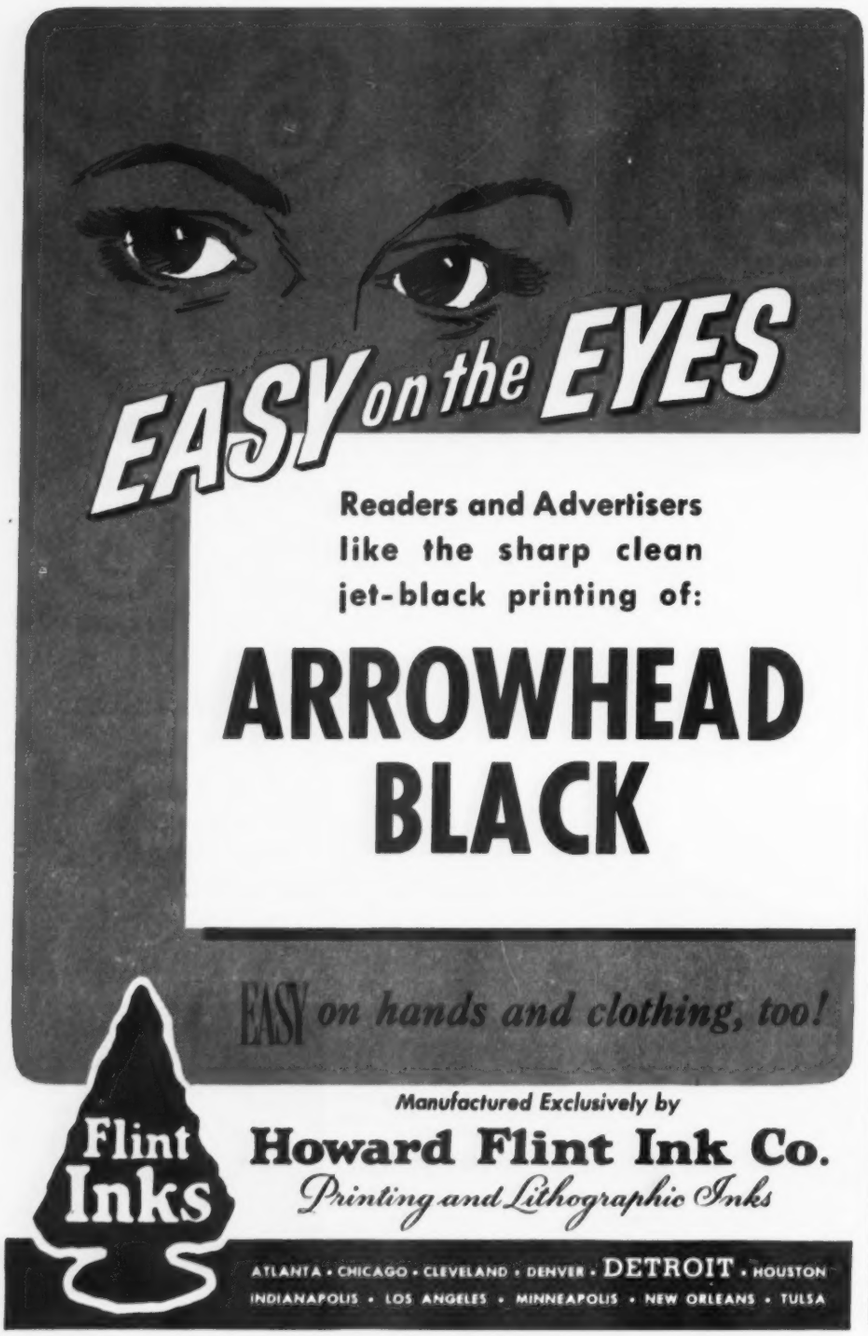

EASY on the EYES
Readers and Advertisers
like the sharp clean
jet-black printing of:
ARROWHEAD
BLACK
EASY on hands and clothing, too!
Manufactured Exclusively by
Howard Flint Ink Co.
Printing and Lithographic Inks
Flint
Inks
ATLANTA • CHICAGO • CLEVELAND • DENVER • DETROIT • HOUSTON
INDIANAPOLIS • LOS ANGELES • MINNEAPOLIS • NEW ORLEANS • TULSA

exhibit traces the history, development and progress since the discovery of the process in 1798 to the high speed, multicolor methods in use today. William M. Winship, LNA Chairman of the Smithsonian Committee and President of the Lithographic Technical Foundation, made the presentation.

News Items

(Continued from Page 55)

Paper Manufacturers Co., Philadelphia, Pa., has named Herb McPhee as its New England representative with head quarters in Milford, Conn. A native of Boston, McPhee has been associated with Carter, Rice & Co., and Robinson-Van Derlip Co.

McPHEE

McLean Passes—John A. McLean, special consultant to the Printing Industry of America, Inc., and former Asst. Production Mgr. at the U. S. Government Printing Office, died Jan. 18 in his home,

John A. McLean was valued member of Research & Engineering Council.

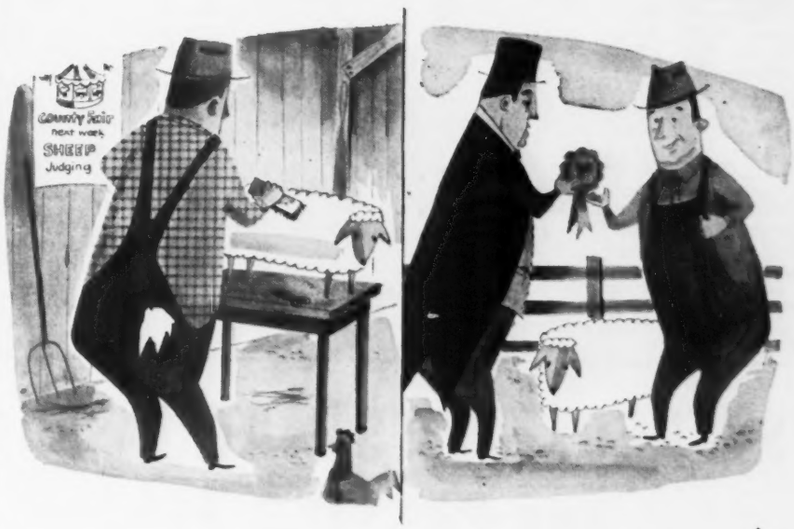
4819 Russell Ave., Avondale, Md. Born in Brooklyn, N. Y., he first worked at the Knickerbocker Press in New Rochelle, N. Y., before coming to the U. S. Government Printing Office in 1910 as an electrotyper. He served as finisher-in-charge, assistant foreman, superintendent of platemaking, and was assistant production manager at the time of his retirement in 1949. Fifty years at the printing trades qualified him to be editor-in-chief of the Dictionary of the Graphic Arts, on which he was working at the time of his death. McLean was past president of the Electrotypers Union, past president of the Washington Club of Printing House Craftsmen, and District Representative of the International Association of Printing House Craftsmen. He was a speaker before many Graphic Arts groups on platemaking processes for the printing trades, served several terms as president of the Avondale Citizen's Assoc., and was active in the Avondale Garden Club and other community organizations. Surviving are his widow, Josephine; a daughter, Mary Ellen Taback; a son, John A., Jr., a brother, Robert McLean, and a sister, Edna Hammond, of New Rochelle. Funeral services were held in the Collins Funeral Home, 3821 14th St., N. W., Chillum, Md., at 9 a.m., Jan. 21, followed by requiem mass in Chillum's St. John Baptist de la Salle Catholic Church.

Walter Scott & Co., Inc. recently reached contract agreements with two unions represented in the company's plant at Plainfield, N. J. One of these was with Lodge 167, Int. Assoc. of Machinists, as well as Pattern and Foundry Workers of the same AFL organization. The other was with Local 23443, Federated Labor Union, AFL, comprising various groups. The two contracts run 16 months, from January, 1954, to May, 1955.

Interchemical Corporation, Printing Ink Div. (IPI) has appointed Hugh S. Fitch Mgr. of the IPI Oakland, Calif., factory. He succeeds L. F. McGuff, who is joining the International Div. of Interchemical Corporation in Latin America. Fitch served three years as Assistant Mgr. of the IPI Oakland factory. A graduate of the University of Michigan, he served nearly five years in the Army during World War II, winning the Purple Heart and Bronze Star awards. He left the service as a Major in 1945.

FITCH

Good Make-Ready gets—Good Results!



Good make-ready is easier and printing quality increases with Cromwell Special Prepared Tympan. It's smooth, always even. Has uniform texture. Gives you clean, sharp impressions with less work. You get a tight, strong packing that's tough—extra hard—with absolute resistance to oil and atmospheric changes. Cromwell Tympan is *unconditionally guaranteed.* You can depend on it.

for good PRINTING make-ready don't say "Tympan" say . . . CROMWELL!

CROMWELL PAPER COMPANY
4801-39 S. Whipple St.
Chicago 32, Illinois

send this coupon now for free samples

Cromwell Paper Company
4801 South Whipple Street
Chicago 32, Illinois

Send working samples of Cromwell Special Tympan to me without charge or obligation.

Name _____

Firm Address _____

City _____ Zone _____ State _____

Press Make _____ Top Sheet Size _____

(check)—Square Cut ☐ Clipped, scored ☐

Edward A. Rehm and M. J. Milani were honored at a dinner Dec. 17 by officers and directors of the Wood Corp. in recognition of 40 years' service with the company. Engraved watches were presented to Rehm by Nelson Maynard, Chairman of the J. Shea, President, acted as master of ceremonies. Shown from left to right are Maynard, Rehm, Shea, Milani and Hewitt.

Mergenthaler Linotype Co. has appointed Paul S. Chisholm as Manager of the New York (N. Y.) Agency. Chisholm has been Mgr. and a Vice-Pres. of Canadian Linotype Ltd., Toronto, Can., since 1952; has been associated with Greenwell-Chisholm Printing Co., Owensboro, Ky., and the Owensboro *Inquirer*. While in the Army, he supervised the letterpress and composing sections of the Reproduction Dept. at Fort Knox, Ky. Following his discharge in 1945, Chisholm became a Linotype representative in Kentucky, Tennessee and a portion of Virginia. In 1950, he was transferred to Linotype's Brooklyn headquarters.

CHISHOLM

Company Ready for Business—The Impruv-A-Mat Corporation of Ohio, recently organized, has opened offices and plant at 400 Lakeside Ave., N. W., Cleveland 13, O. President of the Corporation is J. E. Van Tuyl. Vice President is V. E. Sanders. The firm was established to process hot metal type and linecasting machine matrices by the Jernt Peened Process.

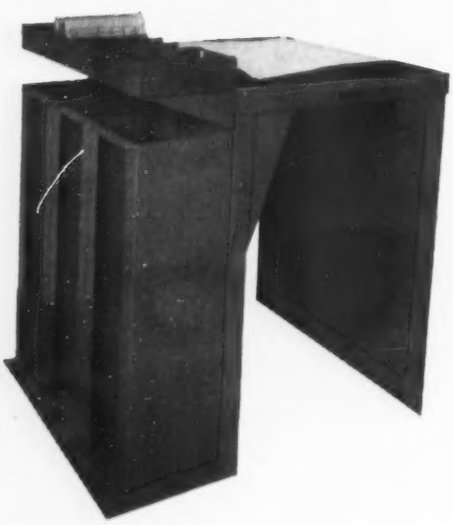
Kahdeman Joins Chemco — Appointment of Richard Kahdeman as sales and technical representative on photoengraving, gravure and lithographic equipment and supplies in the St. Louis area for Chemco Photoproducts Co. was announced recently by Sam B. Anson, jr., Gen. Sales Mgr. Kahdeman is attached to Chemco's Mid-Western Branch in Chicago, of which Spillman Gibbs is branch manager.

KAHDEMAN

Northwest Conference — The Northwest Mechanical Conference, in all probability, will be the best attended of any of the previous meetings of this group. The meeting will be held at Hotel Radisson, Minneapolis, Minn., Saturday and Sunday, Feb. 27 and 28 and on Monday, March 1. President of the Conference is John Copeland, who also is Production Mgr. of the Minneapolis (Minn.) *Star* and *Journal*. According to President Copeland, featured will be a session on r.o.p. color printing with latest techniques being ex-

COPELAND

STEREOTYPER'S MATRIX BACKING UP TABLE and PACKING FELT STORAGE CABINET



Working Surface 26" x 30"

Floor Space—36" x 30", overall height 40"

3 Storage Bins Masonite Top

Receptacles on top for five packages packing felt

2 Packing Felt Moisteners

Net Weight—140 lbs.

Shipping Weight—175 lbs.

Price—$225.00, f.o.b. Lynnfield, Mass.

Other Backing up Tables to your specifications

AMERICAN PUBLISHERS SUPPLY, INC.

P. O. BOX 421 **LYNNFIELD, MASSACHUSETTS**

New England Newspaper Supply Co.

Consolidated with

New England Fibre Blanket Co.

"The Oldest Name in Press Blankets"

★

OUR BLANKETS ARE
KNOWN, USED* AND *SOLD
ALL OVER THE WORLD

NEW ENGLAND NEWSPAPER SUPPLY CO.

Gardener G. DeMallie, General Manager

164 FREMONT STREET WORCESTER, MASSACHUSETTS

LEADING
IN DEPENDABLE PERFORMANCE

It is no accident, but the result of satisfying experience, that newspapers in every part of the world prefer and specify Wood Dry Mats.

WOOD FLONG CORPORATION
HOOSICK FALLS, N. Y.

WOOD DRY MATS
ALWAYS UNIFORM

New York City Office
551 FIFTH AVENUE, NEW YORK 17, N. Y.

plained. Besides other speakers, Color Co-ordinator Lee Dahlberg of the Minneapolis *Star* and *Tribune* will discuss do's and don'ts in r.o.p. color printing. Mailing room mechanization will also be given a thorough going-over. All departments in the plant will have a session, each of which, according to Copeland, will be in charge of an expert. The composing room machinists will have their usual and informative session. This meeting will be presided over by Past Presidents George Curle and Joseph Cory. The composing room session, presided over by Chairman A. E. Rosene, will have two outstanding speakers—Lee Du Bow, who will discuss *What is Expected and Not Received from the Composing Room*. Production Mgr. Harry Eybers of the Washington (D. C.) *Post* is also scheduled to speak on small and large composing room operation.

LAPIERRE

Ray Lapierre, a photoengraver for over 20 years, has joined the Dayton Rubber Co. as sales representative for Dayco newspaper rollers, beginning Jan. 1. A resident of Akron, O., Lapierre is to represent Dayton Rubber in Ohio, Michigan, eastern Pennsylvania and northern New York. The announcement of his appointment was made by L. C. Strobeck, Vice Pres., mechanical goods sales, for Dayton Rubber Co. Lapierre, who was born in Montreal, Queb., Canada, was a photoengraver in both Canadian and U. S. print shops and newspapers. He started in the trade as a youth of 15 in Montreal. Lapierre will work out of the firm's main offices in Dayton, O. He is married and has two children. The family will continue to live in Akron for the time being.

Graphic Arts Association of Fort Worth, Tex., and Employing Printers Assoc. of Montreal (Can.) have affiliated with Printing Industry of America effective Feb. 1, it is announced by James J. Rudisill, Lancaster, Pa., Pres., Printing Industry of America. PIA's membership list now approaches 5000 companies in the United States and Canada. The Montreal association has designated O. S. Markham and E. D. Roberts as Directors on the Board of Printing Industry of America. The General Manager of the Montreal Association is F. Alan Smith. Executive Secretary of the Graphic Arts Assoc. of Fort Worth is J. Lee Davis.

Adds Molding Press — Roto-Type Corp. recently installed an additional hydraulic molding press. The press will enable the corporation to make larger size metal back rubber plates used for hot wax carbon spot printing. The increased use of this type of plate is the result of Roto-Type development of making them resistant to the solvents used in this type of printing. Roto-Type Corp. also announces the resignation of Odd (Ed) Larsen as President. He was succeeded by Thomas A. White, jr., former Vice President. Thomas A. Barbera continues as Secretary-Treasurer.

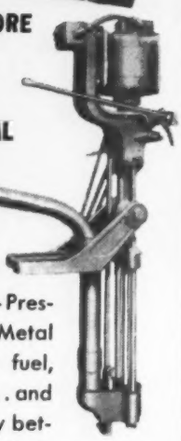
FELDKAMP

John H. Feldkamp Appointed — It is announced by C. A. Brattstrom, Gen. Mgr. of the Geo. H. Morrill Co., Div. of Sun Chemical Corp., that John H. Feldkamp has been appointed Assistant to the Gen. Mgr. with headquarters in New York, N. Y. Feldkamp has been associated with production in the newspaper industry and also in the supply field. For the last several years he has been sales representative for Morrill in the middle west.

Sun Chemical Names Technical Director —Thomas J. Craig was recently appointed Tech. Dir. of Sun Chemical Corp. and its subsidiaries, effective Jan. 1, according to Ralph C. Persons, Pres. Craig will be a member of Sun's Management Committee. He joined the corporation in 1944 and has since 1945 served in the capacity of Gen. Mgr. of the E. J. Kelly Ink Div. Prior to his employment with Sun Chemical Corp., he was Chief of the Production Coding Branch of the War Production Board. Craig holds a Bachelor of Science degree from the University of New Hampshire and a Master of Science degree from New York University. In a subsequent announcement he also was appointed Vice Pres. of Michigan Research Laboratories, Inc., a subsidiary of Sun Chemical Corp.

Automatic Metal Pump

FOR BETTER, MORE ECONOMICAL CASTING OF FLAT, TUBULAR SEMICYLINDRICAL STEREOTYPE PLATES



Let us tell you how the International Electro-Pressure Automatic Metal Pump can save fuel, metal and time... and give you infinitely better castings. It certainly will pay you to investigate today.

INTERNATIONAL NEWSPAPER SUPPLY CORPORATION
134 N. LaSalle St. Chicago 2, Illinois

Linotype First Quarter Earnings—Tentative first quarter results of the operations of Mergenthaler Linotype Co. compare favorably with those of the like 1953 quarter, President Martin M. Reed told stockholders at their recent annual meeting in Brooklyn, N. Y. Results, including net profits, for the company's 1954 fiscal year, which ends Sept. 30, should be similar to those of fiscal 1953, when $3.43 a share was reported, Reed said. The Board of Directors re-elected the following officers: Martin M. Reed, Pres.; Gordon B. Welch, Vice Pres. for Operations; John W. Reid, Vice Pres. in Charge of Sales; Eugene B. Mirovitch, Vice Pres. in Charge of Overseas Sales; Charles F. Lucek, Treas.; John E. Walsh, jr., Secy; John J. Rau, Controller; Carl A. Hergrueter and William H. Moore, both Assist. Secy-Treas.

Peaslee CUTTERS

FOR PHOTOENGRAVERS
ELECTROTYPERS
STEREOTYPERS

FINEST HIGH SPEED STEEL
PRECISION GROUND
• • •
LESS SHARPENING WITH LONGER LIFE

Send for Price List

PEASLEE METAL PRODUCTS CO.
470 TOLLAND ST., EAST HARTFORD, CONN.

Chemco Promotes Gibbs — Appointment of Spillman P. Gibbs to Chicago Branch Mgr. covering Chemco's Mid-West area sales operation was announced recently by Sam B. Anson, jr., Gen. Sales Mgr., Chemco Photoproducts Co., Glen Cove, N. Y. Gibbs has been with Chemco for 19 years. In 1952, he was sales and demonstration representative in the New York territory, where he also assisted Andrew Paulson on technical problems. A journeyman photoengraver and member of Local No. 1. IPEU, Gibbs has had experience in all platemaking operations. He will make his headquarters in Chicago.

GIBBS

Election of Herman H. Ridder as a director of Art Gravure Corp., New York, N. Y., is announced by Frederick D. Murphy, President. Ridder is publisher of the Long Beach (Calif.) *Independent Press-Telegram* and President and a director of Ridder Publications of St. Paul, Minn., and New York, N. Y.

Mead Names Gerhart — H. Warren Kampf, President of The Mead Sales Co., Dayton, O., announced that Frank C. Gerhart has been appointed to the newly created post of advertising manager for Mead Papers, effective Jan. 1. Gerhart is former advertising manager of American Type Founders, Elizabeth, N. J. At Mead, he works with Hubert S. Foster, Dir. of Adv., who has been in charge of Mead Paper promotion for nearly 20 years. Gerhart will spend several months in the Philadelphia advertising production office, but will eventually be located in the headquarters offices, Dayton. Prior to being advertising manager for American Type Founders, he held a similar position at the Champion Paper and Fibre Co., Hamilton, O. He has also been associated with MacDonald Printing Co., Cincinnati, O., and has taught vocational printing in the public school system, Tulsa, Okla. Gerhart is an alumnus of Indiana Univeristy, has been active in the Association of National Advertisers and is a member of the Advertising Club of New Jersey and Industrial Marketers of New Jersey. He is a director of the Direct Mail Advertising Association and recently served on the panel of judges for DMAA and the Printing for Commerce contest of the New York Employing Printers.

GERHART

John W. Veal of Paper Manufacturers Co., Philadelphia, Pa., has been appointed Southeastern Sales Representative with headquarters in Atlanta. He has been active in printing and allied industries since 1930. During the last seven years he has been a member of the Atlanta Club of Printing House Craftsmen. For five years, he was Production Mgr. and then Sales Representative of a gummed label manufacturing firm.

Stereo Session

(Continued from Page 43)

account of stereotypers demanding their rights in cutting base for the composing room. It seems to me stereotypers should demand equipment manufacturers, point gauges for their saws and trimmers if they still want to cut bases, angles, circles and boxes."

Continuing, Padgett said: "The stereotype department is not to blame for all the sins that cause badly printed pages, troubles in molding, and the like." In many plants which he visited he said he had noted a number of form imperfections.

The speaker related that in preparing his talk he had consulted several composing room superintendents and mechanical production managers. The sum total of the suggestions as to what the composing room can do to help the stereotype department are enumerated as follows:

1. Check all the chases for 0.918 in. height; they should lie flat without rock on the molding machine apron; all warped toggle bars should be corrected or renewed. All chases should have proper scribe lines and bolsters for the Automatic machines.

2. All page forms should be locked up square. Gauges should be provided for depth of form. In locking up a page, always tighten the side bar first, then loosen it and draw up the bottom bar to the proper length for the page, using the gauge; then tighten the side bar last. All pages should be planed down before locking up.

3. All type in the page should be 0.918 in. high (+ or − 0.0005 in.). If the news type comes from one machine 0.916 in., another machine, 0.920 in. and the third 0.918 in., the machinist should get busy and adjust the back knives. A machinist should cast a slug in every mold at least once a month and see that all slugs are the right height, which is 0.918 in. and 0.014 in. × the point size of slug. Thus an 8 pt. slug should measure 0.112 in.

4. The Composing Room Superintendent should get together with the Stereotype Superintendent and decide on the height of column rules and all halftones. Column rules and cut vary in height in different cities due to "local conditions."

5. In killing pages after the run has been completed, the man killing out should retrieve all bases that can be reused, put them on trucks and send to the stereotype department. The metal melter, or some handy man around the shop should see that all tape or cement is washed off used bases. These accumulations make it hard to shove a form from a truck, makeup table, or molding machine when the base with cement or tape is upside down from the last time used.

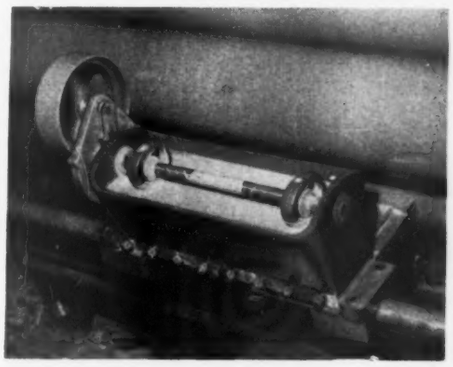
6. Have some kind of a page checkup system where either department knows what is going on during edition times. There are several good systems in use throughout the country.

7. Printers should not be allowed to cut shoulders from or undercut type in any form, as such type elements always have to be replaced after the molding

"CAPCO" Portable Ink Fountain

Installation on Scott High Speed Press

Dayton Daily News, Dayton, Ohio



Weight — Approx. 30 lbs.

- Provides COLOR efficiently
- Increases production—affords pressroom savings up to 75%
- Saves time of pressmen—no costly installations
- Can be used on new or older equipment
- Easily operated and easily maintained

Let Us Tell You About the Many Other Features

CAPITAL TOOL & MANUFACTURING CO.

5000 Calvert Road • College Park, Maryland

Phone: Union 4-7677

TOP MAN ON THE TOTEM POLE

It's almost impossible to please everyone. But you'll be top man on the totem pole with your front office and your advertisers if you standardize on Beveridge Mats. You can depend upon them to give uniform high shrinkage to your specification. And above all, clean, sharp, faithful reproductions with minimum make over. Be top man on the reproduction totem pole—let us send you an order today.

NEW PRODUCTS DIVISION

BEVERIDGE PAPER CO.

INDIANAPOLIS 4, INDIANA

machine pressure reduces the height of the type weakened by undercutting. In mounting 11 pt. shell casts or 0.065 in. zinc engravings, see that the proper height base is under the plates before sending to the stereotyper.

8. Once a month the foreman should see that the machinist sends in a sample of the different kinds of metals used in the office and he should check the analyses when they are returned to see that the right proportion of each ingredient in the metal is present.

9. This one is a dandy: Try to keep the pages moving towards the stereotype department in 3 min. periods or the time necessary to get the pages packed and cast, so the presses will start rolling on time.

10. Secrecy is a word that should never be used around a newspaper. All departments should be notified as soon as a color page, extra section, tabloid or anything that is not in the regular routine of production is planned to be run. Presses have to be washed, stereotypers have to be called in, ink bought, maybe a couple of extra makeup men will have to be called in, or a dozen other things that happen when the chips are down.

It is my belief that all department heads should be called together at least once a week. The immediate past and future should be talked over. If someone has a beef, let him get it out of his system. We have too many kingdoms and too many kings around most newspapers. Everyone should strive to work together. Printers do not send in late pages just to make stereotypers mad. There is always a good reason for late pages. I have never seen a Composing Room Superintendent who tried to go in late with an edition just to spite the three or four departments that follow. It is hard enough to convince management why he went in late without trying to explain he was sore at someone down the line.

Newspapers have grown by leaps and bounds over the past 10 years. Management has been buying additional machinery to get editions on the street. I would like to see closer co-operation between the departments. When a printer saws a piece of base to help get the edition in on time, please forget it, Mr. Stereotyper, and we will try to make your job easier by following the nine rules listed above and make them work 90% of the time.

Great Lakes Officers and Directors

These are the 1954-1955 officers and directors for the Great Lakes Mechanical Conference:

President — Frank Dassori, Pressroom Supt., Detroit *Times*.

Vice Presidents — Cecil Watkins, Mechanical Supt., Sidney (O.) *Daily News;* George Feldt, Mailroom Supt., Milwaukee (Wis.) *Journal;* John Innis, Stereotype Supt., Indianapolis (Ind.) *Times;* Robert Nelson, Production Mgr., Detroit *News*.

Directors — Fred Plimell, Composing Room Supt., *Ohio State Journal;* Ernest Scherer, Photoengraving Supt., Detroit *News;* Joseph Walker, Mailroom Supt., Cincinnati (O.) *Enquirer;* Lloyd Wright, Stereotype Supt., Fort Wayne (Ind.) *News-Sentinel;* Roy Schulz, Pressroom Supt., Milwaukee (Wis.) *Journal;* Immediate Past Pres. Horace H. Parker, Press-Stereo Foreman, Richmond (Ind.) *Palladium-Item*.

Program Chairman—Charles M. Kirk, Stereotype Supt., Detroit *News*.

Manufacturer and Supplier Committee Chairman—Manny Caldweld, Sam'l Bingham's Son Mfg. Co., Detroit.

The Photoengravers' Part in Stereotyping

Ernest Scherer, Photoengraving Superintendent of the Detroit (Mich.) *News*, discussed *The Photoengravers' Part in Stereotyping*. His remarks were brief and to the point. He stated that photoengraving plays an important part in stereotype halftone production. The higher the quality of the photoengraving, the better the stereotype reproduction can be obtained. It is always the aim and objective of his department to supply photoengravings which will stereotype satisfactory.

Solid vs. Strip-Cast Base

During the ensuing discussion period, someone submitted a question about using solid stereotype base as against machine cast strip material for mounting cuts in newspaper forms. There was considerable difference of opinion regarding the stability of both kinds of bases under stereotype mat molding pressure. The consensus of opinion was that both types of bases can be used if plant handling techniques are adjusted accordingly. It seems that most of the executives who do use the strip material use it once and discard it. One stereotype executive stated that in his plant the base is cast to 0.921 in. and

WEB BREAKS?

THE WEB BREAK DETECTOR SYSTEM DESIGNED FOR HIGH SPEED PRESSES

COMPLETE PRESS PROTECTION AGAINST WEB BREAKS

Specify the **CODKSEY SYSTEM**

for information write to:

KORTHE ENGINEERING CO.

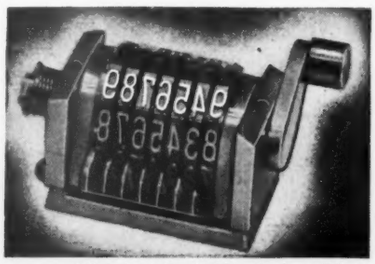
9353 Seymour Ave. Schiller Park, Illinois

Sales Agents { The Goss Printing Press Co., Chicago / R. Hoe & Co., New York / Wood Newspaper Machinery Co., New York

30,000 impressions per hour!

FORCE ROTARY NUMBERING HEADS

For new speed, new trouble-free ease on numbering jobs, specify Force Rotary Numbering Heads. Straight or convex heads for all standard rotary presses. Write for catalog.



MH Rotary Head with male dovetail base

WM. A. FORCE & COMPANY INCORPORATED

216 NICHOLS AVENUE, BROOKLYN 8, N. Y.

after being used a few times is discarded. Another stereotype executive stated that in the discussion about plate mounting bases one thing has been overlooked. He stated photoengravers' zinc plate stock varies as much as from 0.003 in. to 0.004 in. In his plant, solid stereo base is shaved 0.856 in. to compensate for the variation in the thickness of the zinc plate.

Lime Accumulations in Stereo Casting Boxes

A lively discussion took place from the floor when the subject of the liming of stereotype casting boxes came up. Someone submitted the question to Chairman Wright asking for the best means for getting rid of the lime deposits inside the casting box. A number of suggestions were made regarding deliming compounds. One of these is the Water Jacket Cleaner manufactured by Timmons and Charles, 110 Academy St., Jersey City 2, N. J. Another one which is used extensively is called Nu-Coil. This is manufactured by Skasol Corp., Webster Groves 19, Mo. Yet another one is furnished by Dearborn Chemical Co., Dept. TR, Merchandise Mart Plaza, Chicago 54, Ill.

Great interest was created when Robert Frame, Asst. Production Mgr., Zanesville, (O.) Pub. Co., related his experience with Micromet water softener and accompanying equipment. His experience with this method is intended to prevent the formation of lime in stereotype casting boxes, rather than to wait until the lime accumulates and remove it afterwards. His discussion about the use of Micromet appears in a separate article in this issue of *Printing Equipment Engineer*.

Mailroom Mechanization Progresses

IMPROVEMENTS in several items of equipment for newspaper mailing rooms was reported by company representatives at the Mail Room Session of the Great Lakes Newspaper Conference in Indianapolis. Chairman and co-chairman respectively of this meeting were Jesse Hagenbush, Mailing Foreman, Akron, (O.) *Beacon-Journal*, and Ralph Zimmerman, Mailing Foreman, Dayton (O.) *Daily News*.

A film on the Cutler-Hammer Newspaper Stacking and Counting Unit was narrated personally by T. B. Jochem, Development Supervisor, Cutler-Hammer, Inc. The unit is installed in the mail room of the Milwaukee *Journal*. Jochem mentioned that the machine is now designed for counting on the front ends of newspapers or, as some refer to it, the leading edge. Previously, the counting operation was performed on the tail or folded edge of the papers.

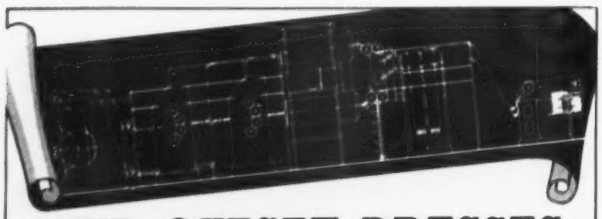
The design of the stacking blade has also been modified. Recognizing the variations in newsprint web widths, Cutler-Hammer has now designed the machine for handling webs between 56 in. and 72 in. wide. Extensions from the sides of the papers also made it necessary to widen the framework on the unit. A report on the C-H Counter-Stacker appeared in the July 1953 issue of *Printing Equipment Engineer*.

Improvements in the Wallastar Automatic Bundler were related by George S Blair, Asst. Mgr., Research and Engineering Dept., and Harry F. Spragg, Project Engineer, Toronto Star, Ltd. Two films were shown, the first on an early model of the machine and another on the improved model.

Spragg mentioned that the machine is now designed for tying smaller bundles. Bundles containing 800 or more pages may be handled. Speeds have been increased to accommodate up to 20 bundles per min. Bundles are tied with 16 ga. round wire which is spot welded and flattened in process. This feature is designed to eliminate cutting of papers at the corners of the bundle. The company claims an approximate 15 per cent savings in round wire by stretching and flattening the band. Spragg stated that the fast weld cooling process enables immediate handling of the bundle. Other mechanical improvements have been incorporated into the machine.

W. H. Hayford, President, Wiretyer Corporation, next discussed the latest improvements on the Wiretyer Newspaper Bundle Tying Machine. Hayford spoke on the Wiretyer installations in the Milwaukee *Journal's* mailing room where pushers were used in conjunction with the machine and of the difficulties experienced in operation. He said that modifications are being added to the machine to make this type of operation successful.

The speaker mentioned also that controls are now located at one side of the machine in convenient reach of the operator. These and other improvements will be added to the older model machines, he reported. The recent machines are available with a welding unit for uniting the wire. He stated that the conveyor table speed has been increased to handle



WEB OFFSET PRESSES

DESIGNED & BUILT TO YOUR SPECIFICATIONS

by GEORGE HANTSCHO

Over 25 years' experience designing and building presses

GRAPHIC ARTS MACHINERY, INC.

37 South 3rd Avenue, Mount Vernon, N. Y. • MOunt Vernon 7-8200

VANDERCOOK PRE-PRESS SYSTEM

VANDERCOOK & SONS, INC.

General Offices, Research Laboratory, Demonstration Room & Factory

3601 W. Touhy Ave., Chicago 45, Ill. Phone: ROgers Park 1-2100

Eastern Office & Demonstration Room

323 East 44th St., New York 17, N. Y. Phone: MUrray Hill 4-4197

Western Office

3156 Wilshire Blvd., Los Angeles 5, Calif. Phone: DUnkirk 8-9931

Mrs. William E. Bowman
7737 North Eastlake Terrace
Chicago 26, Illinois
MASS MAIL
The CHESHIRE Way*
● Automatically attach addressed labels at operating speeds up to 18,000 per hour. Faster, more accurate than any other method, hand or machine. Opens mail room bottlenecks, maintains schedules, reduces subscription complaints.
100,000,000 mailings per month on Cheshire machines. Earlier models still operating after 24 years' constant use.
* An addition to, not a replacement of, your present addressing system. Apply roll strip or continuous pack form labels.
NEWSPAPERS & TABLOIDS
MAGAZINES
CATALOGS
DIRECT MAIL
FLYERS
CHESHIRE MAILING MACHINES, INC.
1415-25 W. Altgeld Street, Chicago 14, Ill.

up to 50 ties per min. and will accommodate between 15 ga. and 18 ga. wire.

According to Hayford, originally the machine was designed for handling up to 21 bundles of papers per min. The Wiretyer is now geared for between 27 and 29 bundles per min. It can be operated for making single ties on either or both ends of the bundle, or a single tie in the center. The machine can either be hand fed or equipped with conveyors for automatic operation.

Composing Session Dominated By Technology

AT THE composing room session of the Great Lakes Mechanical Conference, Indianapolis, Ind., held January 11th, Composing Room Supt. Earl C. Bowles of the Cleveland *News* served as Chairman. As Co-Chairman, Lee Doll recently with Indianapolis Newspapers, served in place of Fred H. Plimell, Composing Room Supt. of the Columbus (Ohio) *State Journal*, who was ill.

The first speaker to be called upon was C. M. (Larry) Flint, Director of ANPA Research. Flint spoke informally and presented a summary of the accomplishments of the ANPA Research Laboratory in Easton, Pa., since starting operations. Flint said it was difficult to swing open the doors of an empty room and expect anyone to be interested. This situation prevailed with ANPA Research until recently. "Now," he said, "we have reached a point where we have something to talk about." The main objective of the ANPA Research Dept. is to help a better job of producing newspapers at lower cost. To do that the ANPA Research Dept. must provide the tools with which to work. Flint also expressed himself as being conscious of the reluctance of some executives in the industry to accept new techniques.

The ANPA Laboratory is working with Dow Chemical Co. on the high speed etching of magnesium. Previously, Flint spoke on this subject at the Photoengravers session (see December 1953 issue of *Printing Equipment Engineer* for article on progress report regarding high speed etching of magnesium). He also spoke of application of a butt welder for welding the ends of the expired coil of wire to the fresh end of a new coil of wire as used on a wire tying bundling machine in mailing rooms. He mentioned the ad marking liquid which is a non-pigmented dye stain for the marking of type to be used again according to repeat schedule in a newspaper composing room. Currently this is being sold by Eastern Newspaper Supply, Inc. He remarked that the liquid in no way affects the casting properties of the stereotype mat. Another interesting piece of equipment upon which the ANPA Research Dept. has spent six years in developing is a microscope currently being manufactured by Bausch & Lomb for measuring the depth of photoengravings and stereotypes. The microscope is available from Alico, Inc., West Springfield, Mass.

Production and Mechanical Executives are invited to submit to the editor informally in a letter devices which have helped production in their plants.

Another interesting item mentioned by Director Flint, the development for which had been supervised by the ANPA Research Dept., is a web lead threader for printing presses for quick rewebbing of

NEWSPAPER AND PRINTING PLANT ENGINEERING
New Buildings • Modernization
Surveys • Consultation
ROBERT W. DICKERSON
2063 EAST 4th ST. CLEVELAND 15, OHIO

MILLER 19x25 SG

LETTERPRESS

The Ideal Cylinder Press for the Small Plant

Write for Information.

MILLER PRINTING MACHINERY CO.

1103 Reedsdale Street Pittsburgh 33, Pa.

The R & B

EXTENSION DELIVERIES

for MIEHLE, BABCOCK, PREMIER and other presses

•

AUTOMATIC PAPER LIFTS

•

Special purpose equipment for the Graphic Arts Industry

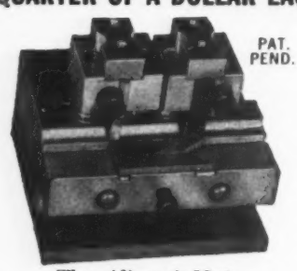
CONSULT US ON YOUR PARTICULAR PROBLEM

THE RATHBUN & BIRD COMPANY, INC.

DESIGNERS AND MANUFACTURERS • FOUNDED 1898

DEPT. PE 379 WEST BROADWAY NEW YORK 12, N. Y.

LINECASTING MATS NOW COST A QUARTER OF A DOLLAR EACH



The *Align-A-Mat*

This simple device will double and treble the life of your working fonts. Will restore to factory standard hundreds of mats ready to be discarded. Will eliminate distributor stops due to lugs worn short.

EVERY MAT SAVED IS 25¢ SAVED

Now in use in hundreds of leading plants here, in Canada and abroad.

Please write for literature.

FISK, 130 W. 46th St., N. Y. 36, N. Y.

the press after a web has broken. He explained the no-pack stereotype mat. He said definitely the ANPA Research Dept. is not in competition with mat manufacturers in developing the no-pack mat. A standard mat of any make may be used with the same shrinkage as customarily used by any newspaper. A sheet of material is placed on the back of the mat and becomes a part of the mat during the molding process. No additional manpower or equipment are required in the use of the no-pack mat. Field tests are encouraging. Flint stated that the stereotyper's job is a difficult one and his department wants to establish controls whereby controls may be exercised from the making of the original engraving all the way through to the finished stereotype plate for the best reproduction. It is one of a main objectives of the ANPA Laboratories to help the stereotyper secure better printing plates.

Monophoto

George E. Nelson of Monotype Corp. spoke on *Monotype compositions.* In particular he discussed his company's Monophoto phototypesetting machine.

"Only in recent years have photographic type composing machines become practical reality," he said. One such machine has already been introduced to the commercial market." Referring to the sponsoring company, Monotype Corporation in England, he said that the company set as its objectives toward a machine that would fully utilize the skill of existing operators and associated personnel by providing mechanisms and procedures with which they are thoroughly familiar. He continued: "Actual commercial production is awaiting outcome of thorough field tests to which six prototype machines are now being subjected. Monotype is anxious to market this machine as early as possible, yet it does not want to do so before being satisfied that the Monophoto machine is a dependable production tool."

Monophoto equipment utilizes the standard present hot metal Monotype keyboard. The paper ribbon and the keyboard operating procedure are the same as in the hot metal machine. The same set-sizing and justifying principle is used in the Monophoto equipment.

Nelson then described operation of the photographic part of the machine which corresponds in utility to the hot metal machine. (For detailed description of operation of the photographic unit see Nov. 1952 issue of *Printing Equipment Engineer*).

Fotosetter Color Film

Harold D. Plautt, Sales Promotion Mgr., Intertype Corporation, exhibited Intertype's sound-color movie entitled *A New Era in Printing.* This film was illustrative entirely of the construction and operation of Intertype's Fotosetter machine. Plautt said that newspaper executives might not use or employ phototypesetting equipment for a number of years but it is well that they be kept informed of progress of all kinds in the Graphic Arts field. Plautt discussed some of the interest which has been shown by newspaper executives in phototypesetting. He referred specifically to W. F. Alexander's Magnesium - Zinc photoengraving plate, (Cleveland *Press*) the type for which was furnished by Intertype Corporation, composed on the Intertype Fotosetter. He spoke of a number of other

IT PAYS to print it on A MIEHLE VERTICAL

CHAS. T. MAIN, INC.

COMPLETE SERVICES for NEWSPAPER AND PRINTING PLANTS

Layouts, Designs, Specifications and Supervision of Construction

Walter E. Wines Consultant

80 Federal Street Boston, Mass.

317 South Tryon Street Charlotte, N. C.

ROTOGRAVURE
PRINTING CYLINDERS

LONG YEARS OF EXPERIENCE IN

Manufacturing Quality:

Rotogravure Printing Cylinders • Rolls • Unetched Graining Cylinders • Wallpaper Rolls • Paper Making Machinery Rolls • For Domestic and Export Use

Excellent Service:

Plating New Cylinders
Replating Etched Cylinders
Repairing Old Cylinders

•

STANDARD PROCESS CORPORATION
Manufacturing Gravure Equipment & Supplies
2704 W. Roscoe Street • Chicago 18, Ill.

PRODUCTION COSTS took a definite drop!

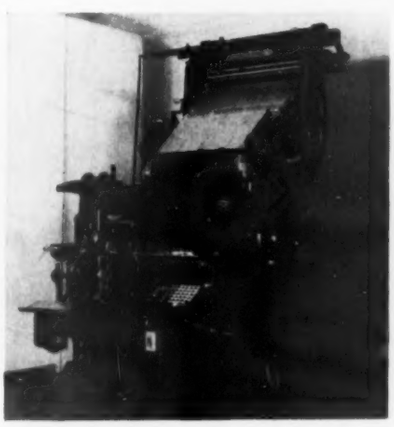
So reports the company auditor to the pleased stockholders . . . "I understand from our Mechanical Superintendent," he adds, "that this has resulted from certain changes that produced more regular and trouble-free operation—practically none of the press time delays that hampered the organization last year . . ." Perhaps it would not have meant much to tell stockholders that these changes included adopting dependable Certified Mats, but back in the plant, it meant a great deal.

For dependable stereotyping, rely on Certified Mats
Certified DRY MATS
CERTIFIED DRY MAT CORPORATION, 9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

accomplishments in the field of photo-typesetting as done on the Fotosetter. He remarked that the greatest single sign-post of recent date was that the first Fotosetter to be installed in a good sized daily newspaper within the next few weeks. It will be used for ad composition. He discussed magnesium engraved plates used in conjunction with Fotosetter composition as offering possibilities for newspaper use in the future. Development work is progressing at the present time. One of Plautt's concluding remarks was that "Hot metal type composition will be with us for a long time to come."

3-D Linotype Pictures

Robert Chamberlain of Mergenthaler Linotype Co., assisted by Field Engineer Carl Meyers, exhibited a considerable number of color slides showing Linotype improvements in third-dimension. Among these slides, Linotype Wide Angle Magazine models were shown. A number of questions were asked by the audience and were answered by Carl Meyers. The third-dimension (that of depth) afforded by the 3-D slides was effective in showing the improved machine parts in relation to adjacent components of the Linotype itself.



Engravers Call for Teamwork

AN APPEAL for interdepartmental teamwork, especially between photographers, artists and engravers, was made by a speaker at the Engraving Session of the Great Lakes Newspaper Conference. The meeting was conducted under the chairmanship of Ernest Scherer, Engraving Supt., Detroit *News*, assisted by Co-Chairman Vince G. Currise, Engraving Supt., Winnebago Newspapers, Inc., Rockford, Ill.

The first speaker on the program, Arthur Czech, Art Director, Detroit *News*, was the proponent of close cooperation between the photo, art and engraving departments. He said: "A good picture may sometimes reproduce poorly, but engraving, stereotyping or presswork will not correct the faults of a badly posed, badly lighted or poorly developed and printed photograph. Missing detail in photographs is not added by the engraving camera, stereo mats or presswork. If we begin with poor and improperly prepared art, there is little the engraver, stereotyper or pressman can do to improve it and chances are that the art will print poorly."

Czech cited television as an influence which has made the public more picture conscious and because of it, laymen have become more critical of what constitutes a good picture reproduction. He reminded the newspaper mechanical executives that this media permits color-correcting of a picture when it is either too black or too white.

The speaker cautioned that photographers should not expect the artist to save a bad photograph by retouching for excessive retouching destroys most photographic values. He mentioned that photographs received from outside sources, especially portrait studio shots, are recopied to obtain better reproduction of the picture by the engraver. He added that the copying and lightening of the heavy shadows can eliminate a great deal of hard and unnatural retouching.

Mr. Czech also counseled that the photographer must compensate for the differences between the artificial light he works under and the lights on the engraver's camera. The artist must also bear in mind, he continued, not to expect the engraver to produce a better halftone cut than the copy he has given him. He must always strive to give him the best possible contrast and good middletones with a minimum of retouching.

Co-Chairman Currise said we must not be concerned with who makes the mistake in a poor reproduction but rather with correcting the errors through cooperation of all concerned. He related what small newspapers lacking a staff of artists could do in obtaining better halftone reproductions. Currise showed several examples of recopying a photograph

"An Opportunity FOR Professional Growth without Parallel"

Fairchild, one of America's leading manufacturers of aerial cameras, graphic arts equipment, and precision instruments, has openings in its Engineering Department for several high calibre engineers with special qualifications. The positions open will satisfy both the inventor, who likes to work alone and the extrovert who does best when supervising and working with others. Starting salaries are high and increases are made periodically based on merit and initiative.

PRODUCT DESIGN LEADER

This is our title for the highest design engineering job at Fairchild. You may presently have a title such as Chief Draftsman, Chief Mechanical Engineer, Chief Designer, etc., but if the described requirements fit, you too may become one of the elite who hold the title of Product Design Leader. The individual we want is an outstanding creative and inventive engineer capable of heading projects in a laboratory but whose experience permits, and desire is, to work from the drafting board. He should be a graduate mechanical engineer or equivalent with about 12 years' experience in development and design of which about 3 years should be in design supervisory capacity; capable of the original design of intricate, precise electro-mechanical and optical instruments; a man with a record of inventive and creative accomplishments; able to supervise the design of subordinate Product Designers and Design Engineers; and coordinate with Program Chiefs, Project Engineers and the Experimental Machine Shop. He will have a wide latitude for independent action. Familiarity with military specifications and requirements is desirable but not essential. This is a top level position, as revealed by the salary and duties, and is not to be confused with that of the usual design engineering.

PRODUCT DESIGNERS

This position is also of high level requiring professional skill and creative thinking. The individual we want is an inventor and an originator of new ideas capable of producing sound solutions to intricate problems. Although this man may be working at a desk or in the laboratory, he shall have a keen desire to return to the drafting board to satisfy his creating ambition. He should be a graduate mechanical engineer or equivalent with about 10 years' experience in development and design; capable of originating the designs of intricate, precise electro-mechanical and optical instruments; and a man with a record of inventive and creative accomplishments. He will have a wide latitude for independent action. Familiarity with military specifications and requirements is desirable but not essential. The salary is high commensurate with these requirements.

Call in person, phone, or send complete resume to
MR. JOHN McCAULEY
23 West John St., Hicksville, L. I.
stating experience, education, salary required and date available.

FAIRCHILD
CAMERA AND INSTRUMENT CORPORATION
Hicksville, L. I. Hicksville 3-4500

on a small paper to obtain the correct contrast.

Color Commands Attention

Newspaper color forces immediate and concentrated attention declared Robert H. Dumke in an address on *Practicability of ROP Color*. Dumke is Production Research Coordinator at the Milwaukee *Journal*. Continuing his argument for more color in newspapers, he said considerable progress has been made in developing means of easing the job of color reproduction in all departments.

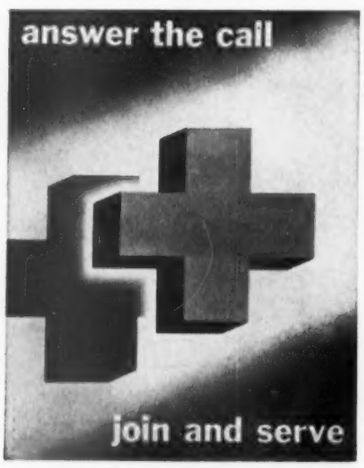
One, he added, is making complete bromide color separation layouts and pasting the bromide separation prints in register with one another so that the engraver can shoot a full page consisting of four, five or more color subjects as a single unit. The bromide prints contain a color balance of 100 per cent blue, 80 per cent red and 70 per cent yellow. A three-step gray scale is placed on each of these prints so the engraver can check his exposure on his screen negatives and on the plates.

The speaker said that if plates are etched cleanly and to a proper depth so that stereotypers can make a good set of mats from the plates, the loss of quality due to reproduction should be very slight. Mr. Dumke used slides in conjunction with his talk.

Leon Link, Production Mgr., Forest City Publishing Co., Cleveland, suggested bringing artists and photographers together with the engravers for a discussion of the problems of good copy for reproduction. A question from the floor about the Dow High Speed Etching Process brought ANPA Research Director C. M. Flint to the speakers platform to discuss the work done cooperatively on the process by the ANPA and Dow Chemical Co. Its present use is in etching line work only. Flint reported it will be used soon on a newspaper. He thought the process will enable newspapers to go into color work faster than thought possible. A description of the process was published in the December 1953 issue of *Printing Equipment Engineer*.

Human Element In Press Maintenance

A TALK on *Preventive Maintenance on High Speed Presses* was given by Everett Hall, Pressroom Supt., Detroit *News*, at the Pressroom Session of the Great Lakes Newspaper Mechanical



CLASSIFIED Advertising

ALL CLASSIFICATIONS

$.75 per line 1⅜" wide. Minimum ad 5 lines, 29 characters per line. Cash with order.

CLOSING DATE—15th of Month preceding Date of Issue

We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

STAR CUT CEMENT

Famous since 1936, hundreds of users testify to the effectiveness of STAR CUT CEMENT. Do a better job of mounting photoengravings, stereotypes and electrotypes by using STAR CUT CEMENT. Composing, stereotype, electrotype and photoengraving executives must see that the mounting job is done right. They know the value of a cement that permits mounting cuts quickly and holds them in place. Be sure to use the PROVED cement—STAR CUT CEMENT.

65c per tube—$5.50 per doz. $5.00 per doz. in 2 doz. lots. $4.50 per doz. in gross lots.

STAR CEMENT COMPANY

45 Malone Avenue
Belleville 9, N. J.

FOR SALE

Christensen 54" x 63" Stream Feeder and Waldron 42" x 60" Aut-O-Lac Sheet Varnisher. Never used—will sell together or separately. Write Box 506 Printing Equipment Engineer.

FOR SALE

Several nearly new full fonts of 8 point Regal No. 1 with bold No. 1712, 7 point Regal No. 1 with bold No. 1622, 7 point Regal No. 1 with Italic No. 1623, 8 point Regal No. 1 Italic and small caps, No. 1717, 8 point Regal No. 1 Italic, no small caps No. 1717 and 6 point Regal No. 1 with bold No. 2056 Intertype matrices. $154.00 per font delivered. Also Misc. split fonts, list and price on application. Direct inquiries to Purchasing Dept., Chicago Tribune, Chicago 11, Ill.

OPPORTUNITY WANTED

2 young Swiss specialists in printing wish to establish an agency for new technical developments or small machines in the printing industry. Please write to cipher PY 22489 L Publicitas Lausanne, Switzerland.

WANTED

Want to buy one Miehle No. 29 Letterpress in excellent condition. Reply to Roger C. Hill, Box 228, San Antonio, Texas.

CLINE-WESTINGHOUSE
ELECTRICAL EQUIPMENT

Unit Press Drives . . . Reels . . . Automatic Tensions . . . Speed Pasters provide safety and reliability with economy. Whether large or small . . . letterpress or offset . . . your press-room can rely on Cline-Westinghouse Electrical Equipment.

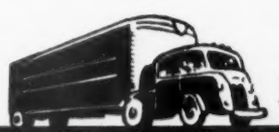
CLINE ELECTRIC MFG. CO.
MAIN OFFICE: 3405 W. 47th St., Chicago 32
410 Bush St., San Francisco — 220 E. 42nd St., New York City

WEB DRYING APPARATUS
for ROTOGRAVURE • WEB-OFFSET • ANALINE LETTERPRESS
B. OFFEN & CO.
168 N. Michigan Ave. — Chicago 1, Illinois

SALE OF PLANTS • APPRAISALS • SURVEYS
ROBT. ROYDEN GREER
Printing Engineer
5201 WILSHIRE BLVD., LOS ANGELES 36
PLANT LAYOUT • LABOR-SAVING RECOMMENDATIONS

THE DOYLE INFRARED DRYER
Patented
for all types of printing machinery
THE DOYLE VACUUM SHEET CLEANER
Patented
Removes dirt, dust, lint and dry spray from paper while printing
The J. E. Doyle Co., 1220 West 6th St., Cleveland 13, Ohio

consult . . . .
CEBA of YONKERS, N. Y.
CHRISTIAN E. BURCKEL, Director
on maintenance problems . . . .



SPECIALISTS
in Moving Printing Equipment

We specialize in dismantling, moving and erecting newspaper and commercial printing presses as well as printing equipment of all kinds. Experienced, trained personnel equipped with modern equipment moves one machine or a complete plant any distance required. All contracts are handled promptly and are fully covered by insurance.

The ALLMEN CO. 8416 LAKE AVE. CLEVELAND 2, O. • OLympic 1-2300

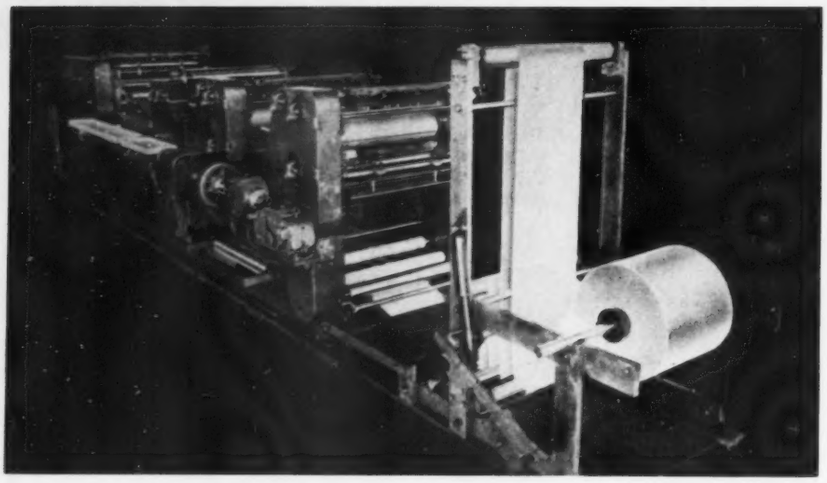
Speed Flex — *THE FASTEST, MOST MODERN JOB PRESS!*

for mailing pieces, throw aways, inserts, and all types of form printing

Designed and sold exclusively by Orville Dutro & Son, Inc. Manufactured by Western Gear Works, oldest and largest manufacturer of geared products in the West.

Orville Dutro & Son, Inc.
1206 Maple Ave., Los Angeles 15, Calif.
Please send us full information on SPEEDFLEX high-speed, multiple operation rotary presses.
NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

COUPON BRINGS DETAILS



Chicago Printer Installs Web Offset Press—J. J. Collins' Sons, Inc., Chicago, recently purchased a 26 in. two color web-fed offset press from American Type Founders, Mount Vernon Div. The new press is equipped with max. printing area of 25½ in. by 22 in. The roll stand is equipped with a PIV speed drive and automatic tension control to take 40 in. diam. rolls with a 3 in. core. Turning bars permit printing both sides of the web. A side register adjustment makes it possible to change register by plus or minus ⅛ in. while the press is running. Also included is a combination numbering and imprinting unit, a numbering section equipped with four numbering positions, a cross and a jump perforating unit, a vertical perforator, a slitter unit and a flat sheet slow-down delivery. There are provisions for installing a Teletype punching unit, a file hole punching unit, two more cross perforating units and a rewind unit. The press is built to run at 10,000 cyl. rev. per hr. when delivering flat sheets, and 15,000 per hr. when rewinding.

Conference. Chairman of this meeting was Elmer A. Smith, Pressroom Supt., Cleveland *News*.

Hall told of the duties of the maintenance crews on the Detroit *News*. He said that a record is kept on all rollers and blankets changed, and the date recorded for future reference. Length of time each roller and blanket have been in use, and amount of impressions run on each set of blankets is also on record.

Included in Mr. Hall's remarks were quotations from an article on the human element in preventive maintenance. It read in part as follows: ". . . high in the requirements of preventive maintenance is to earn the respect and good will of your men, seek easier and better methods of accomplishing tasks, endeavor to make the work and surroundings pleasant, and above all, commend a job well done."

It also included the following: "I have seen too many foremen rising from the ranks, consider themselves above the man he worked with before his advancement even to the point of avoiding a greeting. This man is defeating the purpose for which he was selected and can only hold his room under control through fear and the necessity of the workman for his job."

The Jernt Peened Surface Treatment Process was next explained by Fred Jernt of Impruv-a-Mat Corp. The process may be used in treating the casting surfaces of linecomposing machine molds, matrices for all hot-metal line and type composing machines and the image bearing surface of photoengraving plate stock before etching. It was reported in detail in the October 1953 issue of *Printing Equipment Engineer*.

Newsprint Troubles

In the floor discussion which followed, Chairman Smith mentioned the need for improved quality in newsprint but conceded that even with good newsprint, newspapers encounter many troubles. E. Curtis White, Pressroom Supt., Indianapolis *Star-News*, defended the paper mills for having done a good job on newsprint up until last year. Since then, however, his newspaper has found considerable mechanical defects in rolls, he asserted. He blamed inexperienced help in the paper mills for not being careful enough. Asserting that the mills test the paper thoroughly, he added that if more sulphite were added it would strengthen the paper rolls.

Earl Weiskittel, Pressroom Supt. Youngstown (O.) *Vindicator*, said that not enough time was spent on operations in the pressroom. Pressrooms, he advocated, should systematize on operations. Smith then mentioned that mechanical executives should look into the training of the men in the reel rooms to be sure they know how to handle newsprint. Improper handling has caused many of the troubles on the press.

Many of the pressroom executives in attendance mentioned that paper rolls damaged in shipment cause most of the troubles on the press and that the paper companies are not to blame for this fault. Greater care on the part of those responsible for handling the moving of newsprint was urged.

Someone asked how much control pressmen have over plates before they are put on the press. Smith said that some damage was encountered as plates are sent down to the pressroom. George Fuller, Stereotype Supt., Cleveland *Press*, related that much time was spent on plates at the *Press* to prevent their slapping on the press. He added that they obtained a tighter fit on the cylinders by adjustments made on the Autoplate. Fuller also mentioned that they make better plates in the summer time than in winter when the water is much colder. He said his newspaper does not have a circulating tank to keep water at proper temperatures. Some papers, he concluded, have put automatic valves on their shavers for hot water mixing lines to keep water temperatures constant.

ADVERTISERS' INDEX
FEBRUARY 1954

P. E. E. REPRESENTATIVES

WILLIAM L. OSBORN, Eastern Advertising Representative, 1712 Grand Central Terminal, New York 17, N. Y. Phone MUrray Hill 6-5980.

MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

GEORGE GELL, Central District Advertising Representative, 1276 West Third St., Cleveland 13, Ohio Phone CHerry 1-6645.

Alan Wood Steel Co. 55
All Men Co., The 79
American Publishers Supply, Inc 70
American Type Founders, Inc 23, 24

Bahnson Company 6
Baum, Russell Ernest 61
Beckett Paper Co 25
Beveridge Paper Co., New Products, Div 73
Burgess Cellulose Co 67

Capital Tool & Mfg. Co 73
Ceba of Yonkers, N. Y 79
Certified Dry Mat Corp 77
Challenge Machinery Co, The 2
Champlain Co., Inc 8
Cheshire Mailing Machines, Inc 75
Cline Electric Mfg. Co 79
Cottrell, C. B., & Sons Co 29
Cromwell Paper Co 69
Cutler-Hammer, Inc 10, 11

Dexter Folder Co 53, 57
Dickerson, Robert W 75
Doyle, The J. E., Co 79
Dutro, Orville, & Son, Inc 79

Eastern Newspaper Supply, Inc 61

Fairchild Camera & Instrument Corp 14, 78
Fisk Industries 76
Flint, Howard, Ink Co 68
Force, Wm. A., & Co 74

General Electric Co 30
Goss Printing Press Co., The 16
Graphic Arts Corp. of Ohio 61
Graphic Arts Machinery, Inc 74
Greer, Robt. Royden 79

Hamilton Mfg. Co 59
Hamilton Tool Co 17
Hammond Machinery Builders, Inc ..... Inside back cover
Heidelberg Automatic Presses 9
Hess & Barker 6
Hoe, R., & Co., Inc 19
Huber, J. M., Corp 22

Imperial Type Metal Co 32, 57
International Newspaper Supply Corp 72
Intertype Corporation ..... Outside back cover

Jernt Engineering, Inc 60

Korthe Engineering Co 74

Lake Erie Engineering Corp 28
Linotype Parts Co ..... Inside front cover, 53
Ludlow Typograph Co 7

Magnacraft Mfg. Co 20
Main, Chas. T., Inc 76
Matrix Contrast Corp 34
Mergenthaler Linotype Co 51
Miehle Printing Press & Mfg. Co 76
Miller Printing Machinery Co 76
Mohr Lino-Saw Co 12
Morrison Company, The 33
Motter's, Geo. F., Sons 64

New England Newspaper Supply Co 71
Nolan Corporation 75

Offen, B., & Co 79
Oxy-Dry Sprayer Corp 13

Peaslee Metal Products Co 72
Printing Equipment Engineer 58
Printing Machinery Co 54

Rapid Roller Co 27
Rathbun & Bird Co., Inc 76
Richards, J. A., Co 62
Roback, F. P., Co 63
Rouse, H. B., & Co 66

Scott, Walter, & Co., Inc 3
Sinclair & Valentine Co 18
Sta-Hi Corporation 1
Standard Process Corp 77
Star Cement Co 79
Statikil 75
Strong Electric Corp 31

Teletypesetter Corporation 15
Tingue, Brown & Co 65

Vandercook & Sons, Inc 74
Vulcan Rubber Products, Inc 21

Wiretyer Corporation 26
Wood Flong Corp 71
Wood Newspaper Machinery Corp 4

Hammond OF KALAMAZOO

TRIMOSAWS and STEREO EQUIPMENT

TRIMOSAWS

Glider
"The Saw with the Ball Bearing Table"

Mercury
"The Saw with the Ball Bearing Gauge"

Ben Franklin
"Finest Saw in the Low Price Field"

EasyKasters

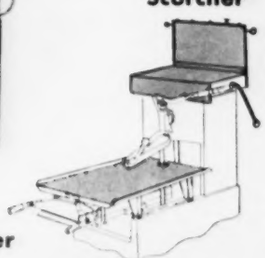
Full Page
EasyKaster

5 and 6 Column
EasyKaster

EasyKaster
Pig Molder

Scorchers

EasyKaster
Scorcher



Full-Page
Scorcher

Routers

Radial Router

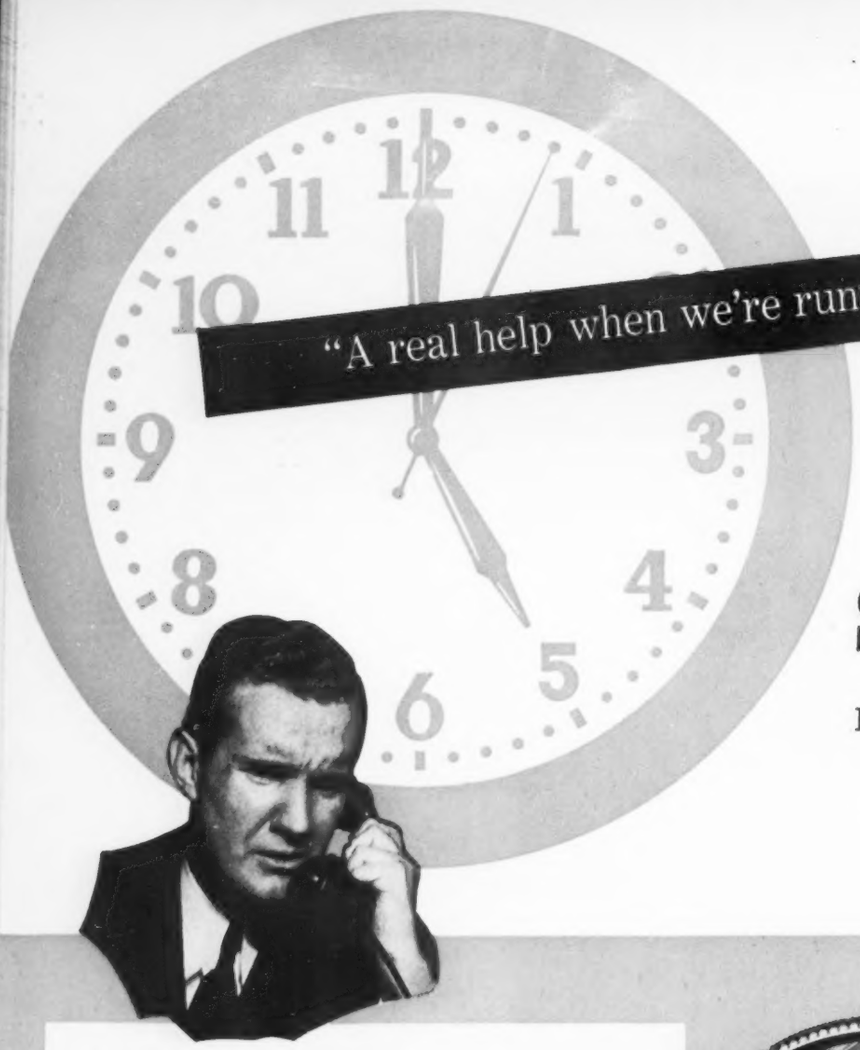
Router Planer

PlateShaver

Full Page
PlateShaver

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE KALAMAZOO, MICHIGAN



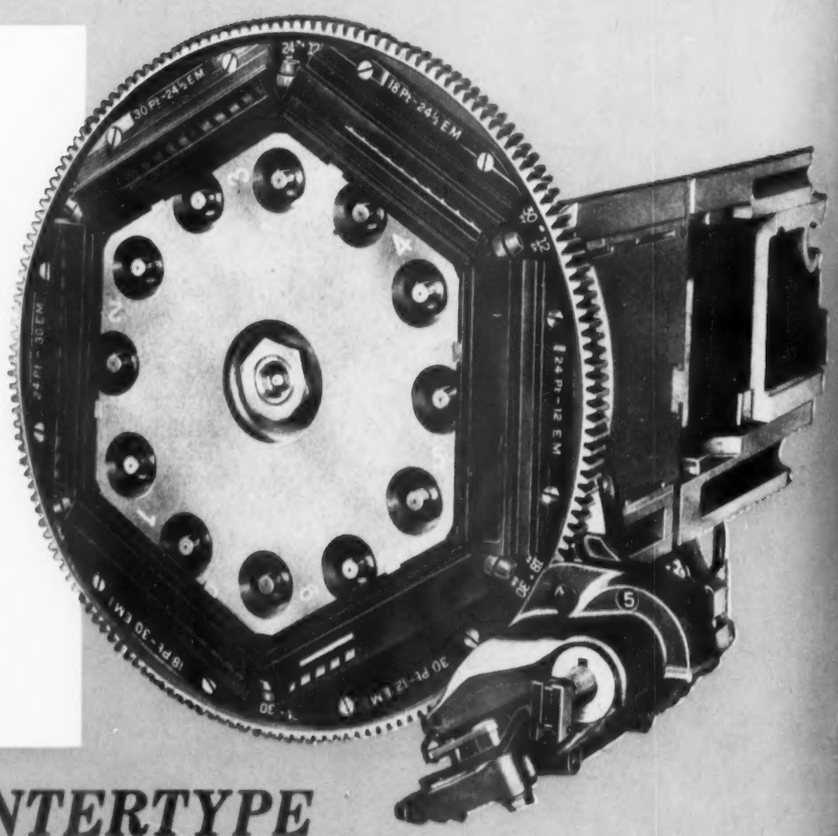
INTERTYPE
Six-Mold Disk

Faced with tight production schedules?
Consider these advantages of the
Intertype Six-Mold Disk with its
50 per cent more mold capacity

- ✓ No need to stop for liner changes.
- ✓ No need to stock extra liners.
- ✓ No time out for selecting ejector blades—the correct blade is brought into play *automatically*.
- ✓ Six molds can be set up for slug sizes from 5 to 48 point. No interruption necessary to produce single or double column heads, text, classified, even overhang grocery copy.
- ✓ Many shops use 30-em liners throughout . . . saw slugs to required length right on the machine.

The Intertype® Six-Mold Disk reduces non-productive machine time and boosts profits in newspaper plants and commercial printing establishments.

Put the Six-Mold Disk to work for you.



Look to Progressive INTERTYPE

INTERTYPE CORPORATION, Brooklyn 1, New York
CHICAGO · SAN FRANCISCO · LOS ANGELES · NEW ORLEANS · BOSTON
In Canada: Toronto Type Foundry Co. Ltd., Toronto, Montreal, Winnipeg, Vancouver, Halifax

Set in Century Schoolbook and Century Bold